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HONG KONG



MEDICAL & SANITARY REPORT

FOR THE YEAR

1928

BY

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Director of Medical and Sanitary Services

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HONG KONG



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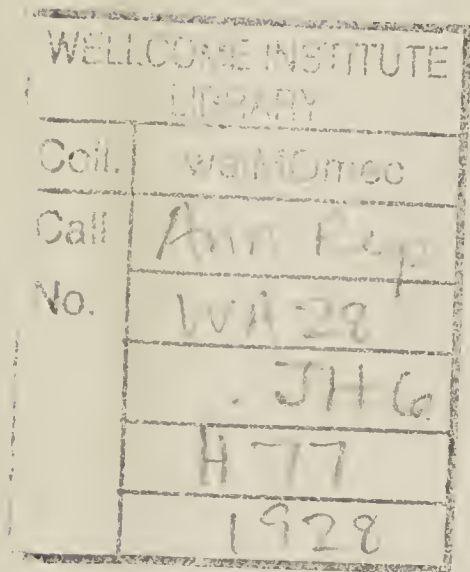
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ANNUAL MEDICAL REPORT FOR THE YEAR ENDING
31st DECEMBER, 1928.

INTRODUCTION.

1. In order to give a clear impression of the Public Health conditions obtaining in Hong Kong it is necessary first to describe the situation of the Colony, its geographical features, its climate, the nature of the population and the bearing old Chinese traditions, beliefs and customs, have on the question of co-operation with the authorities in the promotion and preservation of the Public Health. It is also desirable to indicate the various organisations which together make up the Public Health machinery.

2. The Territory under British jurisdiction includes the Colony Proper, namely, the Island of Hong Kong with the Peninsula of Kowloon and the Leased Territory or New Territory as it is so often called. In this Report the term Colony means the Colony Proper.

3. Situated between 22°-9' and 22°-37' North Latitude the area under discussion is just within the northern limits of the tropics. It is in fact practically on the same level as Calcutta. It may be said to form the lower extremity of the left bank of the estuary of the Canton River, at the head of which is the city of Canton and on an island in which stands the Portuguese Colony of Macao.

4. Topographically the Island of Hong Kong and the Peninsula of Kowloon may be described as a series of granite ridges separated by narrow valleys and having here and there flat areas facing the sea. The New Territory is of similar formation with some fairly wide valleys towards the north and west.

5. The Climate—From May until October the climate is hot, muggy and enervating with the air more or less saturated with moisture. From November to the end of March the weather is dry, cool, and invigorating, necessitating for comfort the wearing of warm clothes and the provision of fires in the houses. Frost is unknown.

6. With regard to population there are no accurate statistical figures, the great movement to and from the Colony and the facility with which the border is crossed preventing accurate checking. Hong Kong being the principal entrepôt for South China and its harbour one of the busiest in the world, every day on an average 3,000 to 4,000 individuals pass to or from China by river steamer and by rail, and there are others who arrive and depart by junks or smaller vessels. During times of political unrest in China many thousands from the mainland sojourn in the Colony, some of whom return to their homes when conditions are more settled, others remaining attracted

by the opportunities offered for employment. It is estimated that the civil population of the Colony is 979,440 of which 550,000 reside in the City of Victoria, 270,000 in the Town of Kowloon, over 100,000 on boats in or about the harbour and the remainder in villages.

7. The Chinese outnumber the rest by 50 to 1, the great majority being illiterate working people who reside in Hong Kong because of the facilities for employment but who return to their native towns and villages when too ill or too old for labour. Through this exodus the death rate of the Colony is considerably lower than it otherwise would be.

8. The traditional beliefs of the uneducated Chinese as to the cause of diseases, the means of spread and the factors which affect its course are so at variance with modern teaching, that there is little chance of promoting voluntary co-operation between them and the authorities in the matter of the prevention and control of disease, until they can be brought to understand the true nature of the problems and are conscious of the usefulness of the measures advocated. The proximity of China and the constant intercourse makes it harder to overcome prejudices than is the case in countries further afield. The greatest hope lies in propaganda and education.

9. So closely related are Hong Kong, Canton, Macao and the River Ports in the matter of trade, and such is the amount of traffic both human and goods which pass between them that, up-to-date, it has been found impossible to devise any system of quarantine which would effectually safeguard one city against introduction of disease from the other and, at the same time, preserve that freedom of commercial movements on which these cities depend for prosperity. It has been deemed best to treat them as forming one unit, as suburbs the one of the other, and to strive for a working agreement between the various health organisations to the end that some means, other than imposing restrictions against a whole port, may be found to prevent the spread of infection.

10. The machinery for the promotion of the Public Health in Hong Kong is complex, in that organisation of energy both for the cure and the prevention of disease is divided among a number of units, governmental and non-governmental, which operate more or less independently of one another under conditions which can hardly be said to be conducive to co-ordination or co-operation.

11. In 1927 the Medical Officers of Health were transferred to the pay roll of the Medical Department though they still remained seconded to the Sanitary Department.

During the year under review a further step towards the co-ordination of Medical and Sanitary work took place in the

changing of the title of the head of the Medical Department from that of "Principal Civil Medical Officer" to that of "Director of Medical and Sanitary Services".

At the meeting of the Legislative Council on September 20th the Officer Administering the Government said—"The Principal Civil Medical Officer becomes the Director of Medical and Sanitary Services and will be responsible for the technical side of the work of the Medical Officers of Health and for the advice they will give to the Sanitary Board. It is hoped that this arrangement will make it possible to follow the principles on which the Colonial Office has recently laid such stress, and to pay more attention to the methods of prevention for which the best technical advice available is necessary, and under this scheme should be available."

Matters were left at this stage pending the return of His Excellency the Governor and the appointment of a permanent Director.

At the end of the year the Medical and Sanitary Departments were still separate and distinct.

12. The following table shows the bodies concerned in the various operations and the authorities in control.

CURE OF DISEASE.

<i>Institution</i>	<i>Accommodation</i>	<i>Controlling Authority</i>
Govt. Civil Hospital	212 beds	Medical Department*
Victoria Hospital	71 ,,	Medical Department
Kowloon Hospital	44 ,,	,, ,,
Peak Hospital	20 ,,	,, ,,
Infectious Diseases Hosp..	26 ,,	,, ,,
Mental Hospital	32 ,,	,, ,,
Gaol Hospital	30 ,,	Prison Department
Tung Wah Hospital (Chinese charity Hosp.).	400 ,,	Tung Wah Committee
Kwong Wah Hospital (Chinese charity Hosp.).	250 ,,	Kwong Wah Committee
Tsan Yuk Maternity Hosp.	57 ,,	Chinese Committee
Chinese Eastern Maternity Hosp.....	22 ,,	,, ,,
Chinese Public Dispensaries	(8 in number) Chinese Committee for each.	
The Nethersole Hospital & Alice Memorial Hosp. ...	126 beds	London Mission
The Matilda Hospital	50 ,,	Special Committee
The French Hospital	50 ,,	French Mission
The Military Hospitals		Military Authorities
The Naval Hospitals		Naval Authorities

*One hundred beds in the Government Civil Hospital have, for teaching purposes, been placed under the control of the professors of Surgery, Medicine and Gynaecology of the Hong Kong University.

The out-patients department of this Hospital is also under their charge.

13.—PREVENTION OF DISEASE.

<i>Activity</i>	<i>Controlling Authority.</i>
Town Planning	Public Works Department
House Construction	„ „ „
Sanitation of Houses and surroundings	Sanitary Department
Collection and disposal of refuse ...	„ „
Collection and disposal of night soil ..	„ „
Construction and maintenance of sewers and drains	Public Works Department
Provision of drinking water and control of same	„ „ „
Control & protection of food supplies	Sanitary Department
Registration of Births and Deaths ...	„ „
Control of epidemic causing diseases ..	„ „
Control of special diseases such as Malaria, Tuberculosis & Leprosy...	Med. Dept. & Sanitary Department
Measures for the welfare of Mothers and Infants.....	Tung Wah Hosp. Committee, Y.W.C.A., Tsan Yuk Hosp. Committee.
Measures for the welfare of school children	Education Department & Medical Department.
Vaccination	Medical Department
Port Health Work	„ „
Bacteriological Institute	„ „
Public Mortuaries	„ „

14. The St. John's Ambulance Brigade, which holds a strong position in the Colony and which does excellent work both in the training and the performance of first aid duties, renders valuable assistance to the authorities.

15. *Conveyance of the Sick.*—Motor Ambulances for the conveyance of the sick are housed at the fire stations and are controlled by the Police and Fire Department.

The Tung Wah Hospital have a Motor Ambulance of their own which is garaged at the Hospital.

SECTION I.

ADMINISTRATION.

1.—STAFF.

The total authorised establishment of the Medical Department on the 31st of December 1928 was as follows:—

Head quarters Staff.

Director of Medical and Sanitary Services	1
Deputy Director of Medical and Sanitary Services ..	1

Health Division.

Medical Officer of Health	1
Second Medical Officer of Health	1
Assistant Medical Officers of Health	2*
Assistant Medical Officer for Schools	1
School Nurse	1
Port Health Officer & Inspector of Emigrants	2
Chinese Assistant Port Health Officers and Inspectors of Emigrants	2
Vaccinators	12

Medical Division.

Medical Officers	9
Assistant Visiting Medical Officer to Chinese Hospitals and Dispensaries	1
Chinese Medical Officers	6
Radiologist	1
Radiographer	1
Masseuse	1

Bacteriological Institute and Research Division.

Bacteriologist	1
Assistant Bacteriologist	1
Class II. Laboratory Assistant	1
Class VI. Laboratory Assistants	2
Malaria Research Officer	1*
Malaria Research Inspector	1*

Division of Chemical Analysts

Government Analyst	1
Assistant Analyst	1
Assistant Analyst Grade II.	2
Sampler	1

*Posts vacant during the year.

Apothecaries and Dispensers.

Apothecary	1
Assistant Apothecaries	2
Dispensers	5
Probationer Dispensers	2

Nursing Staff.

Principal Matron	1
Matrons	4
Home Sister	1
Nursing Sisters	43
Charge Nurse	1
Staff Nurses	3
Probationers	26
Dressers	17
Head Attendant Mental Hospital	1
Assistant Attendant Mental Hospital	1
Female Attendant Mental Hospital	1
Ward Masters	3
Midwives	7

Clerical Staff.

Accountant	1
Clerk Class II.	1
Clerks ,, IV.	3
Clerks ,, V.	1
Clerks ,, VI.	9

Other Officers.

Steward	1
Linen Maid	1
Office Attendants, Ward Boys, Amahs and Coolies ..	267

2. The following were the principal changes which took place during the year:—

Dr. W. B. A. Moore returned from leave on January 3rd and took over the duties of Principal Civil Medical Officer from Dr. J. T. Smalley, who had been Acting P.C.M.O. during the illness of the late Dr. J. B. Addison, M.B.E.

On February 1st the title of “Principal Civil Medical Officer” was changed to that of “Director of Medical and Sanitary Services” and a new post of “Deputy Director” was created. Dr. Moore was appointed to the latter post but held the position of Acting Director for the remainder of the year.

In November Dr. A. R. Wellington was appointed Director of Medical and Sanitary Services but did not take up duty until 1929.

Dr. J. T. Smalley acted as Deputy Director from February 1st in addition to his duties as Medical Officer in charge of Victoria Hospital.

3.—*Leave of Absence.* The following were granted leave of absence:—

Dr. D. J. Valentine, M.C., Medical Officer in Charge Government Civil Hospital from 6th May, 1928 to 27th February, 1929.

Dr. J. R. Craig from 23rd June, 1928 to 18th July, 1929.

Dr. J. P. Fehily, Health Officer of Port from 1st October, 1928 to 28th November, 1929.

Dr. E. P. Minett, Bacteriologist from 25th January, 1928 to 8th November, 1928.

Dr. (Mrs.) E. M. Minett, School Medical Officer from 25th January, 1928 to 8th November, 1928.

4.—*Appointments.*—Dr. W. K. Dunscombe was appointed Assistant Bacteriologist on December 12th 1927, and arrived in the Colony on January 5th. During the absence on leave of Dr. E. P. Minett he acted as Government Bacteriologist.

Dr. H. A. Fawcett was appointed 2nd Medical Officer of Health on March 8th, and arrived in the Colony on April 13th.

Dr. F. J. Farr was appointed Radiologist on September 20th and arrived in the Colony on November 25th.

During the year a new post of Masseuse and Electrotherapeutist was made to which Miss Siggins was appointed and commenced work on July 15th.

The post of Malariologist which was provided for in the Estimates remained unfilled.

Dr. (Mrs.) A. L. Dovey was appointed 2nd Assistant Visiting Medical Officer to Chinese Hospitals and Dispensaries becoming 1st Assistant on the death of Mrs. Hickling.

5.—*Deaths.*—It is with great regret I have to record the deaths of Dr. J. B. Addison, M.B.E., Principal Civil Medical Officer, and Dr. (Mrs.) A. D. Hickling, M.B.E., Assistant Medical Officer to Chinese Hospitals and Dispensaries.

6.—*Chinese Medical Officers.*

Appointments.—The following were appointed during 1928:—

Dr. (Miss) Lai Po Chun on 1st June, 1928.

Dr. Bau Tsu Zung on 23rd July, 1928.

Dr. A. D. Wong on 23rd July, 1928.

7.—*Nursing Sisters.*

Leave of Absence.—Leave of absence was granted to the following:—

Miss E. A. Girling, Principal Matron from April 3rd to November 11th, 1928.

Miss G. Chettle, Matron, Victoria Hospital from February 4th to October 10th, 1928.

Miss E. C. Maclaren, Home Sister from February 19th to November 9th, 1928.

Miss M. K. North, Nursing Sister from February 2nd to October 11th, 1928.

8.—*Appointments.*

Miss E. G. Williams, Nursing Sister, on 2nd December, 1927.

Miss J. F. Scales, Nursing Sister, on 31st January, 1928.

Miss E. G. Tate, Nursing Sister, on 24th February, 1928.

Miss I. Warbrick, Nursing Sister, on 5th April, 1928.

Miss A. Cummins, Nursing Sister, on 5th April, 1928.

Miss C. I. Watson, Nursing Sister, 18th May, 1928.

Miss A. I. Smith, Nursing Sister, 1st June, 1928.

Miss H. M. Mahy, Nursing Sister, 1st June, 1928.

Miss J. N. Edwards, Nursing Sister, 13th July, 1928.

Miss K. E. Gordon, Nursing Sister, 10th August, 1928.

Miss C. Duvall, Nursing Sister, 10th August, 1928.

Miss A. Cowley, Nursing Sister, 7th September, 1928.

Miss A. S. Rogers, Nursing Sister, 3rd October, 1928.

Mrs. M. J. Staple, Nursing Sister, 1st June, 1928.

Resignation.—Miss E. G. Williams, Nursing Sister, resigned on 19th November, 1928.

9.—*Ordinances*.—The Ordinances passed in 1928 dealing with or affecting public health or medical matters were the following:—

Ordinance No.	4.—Dangerous Drugs.
„	No. 5.—Principal Civil Medical Officer. (Change of Name).
„	No. 9.—Dentistry.
„	No. 19.—Public Health and Buildings.
„	No. 20.—Pharmacy and Poisons.

10.—*Financial*.—The amount sanctioned in the Estimates for the Medical Department was \$861,058.00 and the Expenditure was \$786,638.21.

Revenue received:—

For Medical Treatment	\$108,526.39
„ Medical Certificates	20.00
„ Bacteriological Examinations	6,635.23
„ Chemical Analyses	15,562.00
„ Bills of Health	11,088.00
„ Medical Examination of Emigrants ...	164,516.00
TOTAL	<u>\$306,347.62</u>

11.—*Ratio of expenditure on medical and sanitary services to total revenue from all sources*.—Because of the overlapping which occurs where a work serves both a utilitarian and a sanitary service, it is impossible to assess exactly the amounts which have been spent for purely medical and sanitary purposes. Including all water works and drainage works as being primarily of a sanitary nature the following shows the commitments as laid down in the Estimates for 1928:—

Expenditure by Medical Department	\$ 861,058
„ „ Sanitary Department	645,000
„ „ Public Works Department .	1,227,680
„ „ Police Department	9,000
„ „ Subsidies to Charities	94,624
„ „ Miscellaneous	11,086
TOTAL	<u>\$2,848,448</u>

$$\text{Ratio} = \frac{\text{Expenditure 2,848,448}}{\text{Revenue 21,344,535}} = 13.34\%$$

SECTION II.

PUBLIC HEALTH.

A. GENERAL REMARKS.

1.—It is usual to gauge the health of a community by the death rate for a high death rate means a high sickness rate and vice versa. The number of deaths recorded indicates very correctly the deaths which have taken place in the Colony, but owing to the desire of the Chinese to expire in their native towns and villages and the consequent exodus of many who feel their end to be approaching, the death records are considerably lower than would be the case were all the deaths from diseases contracted or developed in the Colony recorded against it. Even if the death figures were corrected, the absence of accurate figures for the population makes it difficult to obtain rates which would form useful bases for comparisons.

2. The following Table shows the death rates of the Colony calculated on the deaths recorded and the estimated population.

Estimated Population				Deaths					
Year	Chinese	Others	Total	Chinese		Others		Total	
				No.	Rate	No.	Rate	No.	Rate
1927.....	873,900	16,500	890,400	14,525	16.3	218	13.2	14,761	16.5
1928	961,290	18,150	979,440	14,553	15.1	182	10.0	14,757	15.0

More than half of the deaths were due to respiratory diseases and 30 per cent of ~~the whole~~ ^{these} were caused by pulmonary tuberculosis which stands out as the principal death causing disease of the Colony.

3. *General Diseases.*—The only figures available for judging the prevalence of the different diseases included under the class called “general” are those furnished by the Government Hospitals and the Western Clinics of the Chinese Hospitals, Tung Wah and Kwong Wah. These figures are, however, only a fraction of the whole and too much importance should not be placed on deductions made from them. Though the educated Chinese appreciate the value of so called Western Medicine, the bulk of the population still pin their faith to the old fashioned Chinese decoctions and when ill seek advice from one or more of the many empiricists who practice in the City. A number of those who enter the Government hospitals do so only after they have made full trial of Chinese medicines and have exhausted their means of subsistence.

4. Year by year, however, the value of Western Medicine becomes more and more appreciated. Proof of this is the ever increasing number of those who attend the out-patient departments of the Government hospitals and of those who seek admission to the wards.

5. Judging from the hospital returns the important diseases of this category in decreasing order of prevalence are bronchitis, diarrhoea, hepatitis, pneumonia and broncho-pneumonia, influenza and dysentery.

6. *Communicable Diseases.*—(a) Mosquito or insect borne diseases—The mosquito borne diseases, Malaria, Dengue and Filariasis, not being notifiable, incidence figures are not available and the only information obtainable is that put up by certain hospitals and private practitioners. Most of the population either receive no treatment or are attended by Chinese herbalists who send in no reports. Such being the position it is obvious that incidence and death rates cannot be given.

7. *Malaria.*—Judging from the hospital admissions this disease was less prevalent than in previous years. The cases treated in the Government Hospitals for the last four (4) years were as follows:—

1925	1,142
1926	920
1927	670
1928	487

8. The incidence among the Police in the New Territories for the same period was:—

1925	1,205
1926	877
1927	428
1928	278

All Police Stations are now screened and the men provided with mosquito curtains. Prophylactic quinine is given and the living rooms are regularly sprayed with insecticide to repel mosquitoes and to kill those that may be present.

9. The total number of deaths attributed to Malaria was 295 or 2% of the total deaths. During the last ten years the calculated death rates per 1,000 population have on one occasion only exceeded unity. This does not prove that the Colony is free from the breeding places of malaria carrying mosquitoes, but it would appear to prove that there are few such places within flying distance of the areas where the masses of the population reside.

10. From the general topography of the country, from what has already been learned of the mosquito fauna, and from comparisons with Malaya, Assam, Sumatra and the Philippines one is inclined to suspect that the breeding grounds of the potential carriers are the small collections of clear water lying in the nullahs and at the hill foots, and that the large areas of wet cultivation are not so dangerous as they have been supposed to be. However, much more detailed work will have to be done before the whole truth is brought to light.

11. The 1928 Estimates contained provision for a Malaria Research Officer and one inspector for malaria investigation work.

It was intended that the latter should work under and assist the former. Endeavours were made through the Colonial Office Authorities to obtain an experienced Malaria Research Officer but without success.

12. *Dengue*.—Dengue is endemic in Hong Kong and from time to time reaches epidemic form. There was nothing in the way of an epidemic in 1928.

13. *Filariasis*.—There are no accurate statistics concerning this disease.

14. *Infectious Diseases*.—(b) The notifiable diseases are Plague, Cholera, Smallpox, Diphtheria, Scarlet Fever, Enteric and Para-typhoid Fevers, Relapsing Fever, Cerebro-Spinal Fever, Typhus Fever, Yellow Fever, Puerperal Fever, and Rabies (human and animal). Responsibility for reporting lies with the legally qualified and registered practitioner attending the case, or in the absence of such a practitioner, on the occupier or keeper of the premises or in default of such on the nearest male relative living on the premises, or in default of such relative on any person in charge of or in attendance on the sick person. Reports are to be made to the Medical Officer of Health or to the Officer in charge of the nearest police station.

15. In China notification is not compulsory and the Chinese in Hong Kong either through ignorance or, what is more probable, from a desire to conceal the case, fail to notify. In actual fact practically the only reports received by the M.O.H. are those from qualified Private Practitioners or from Medical Officers in charge of the Public Mortuaries where the bodies, dumped in the street by the friends or relatives of the deceased, have been taken for inspection and disposal.

16. The Health Authorities, when they do discover a case of infectious disease, have no power to remove it to hospital unless the patient or his guardian consents or unless a magistrate makes an order of removal.

17. The number of cases notified during the year was:—

Bubonic Plague	4
Cholera	3
Small-pox	616
Diphtheria	90
Scarlet Fever	0
Enteric	240
Para-typhoid	18
Relapsing Fever	0
Cerebro-Spinal Fever ...	21
Typhus	0
Yellow Fever	0
Puerperal fever	20
Rabies	0

18. *Small Pox*.—This disease which every year manifests its presence in the cold months by causing sporadic outbreaks but which disappears with the hot weather, this year continued throughout the summer to assume epidemic form in November when 100 cases were notified. In December there were 340 cases. The total cases brought to the notice of the Authorities during the year were 616 of which 304 or 50% died. Of these 126 were treated in the Tung Wah Hospital with a mortality rate of 50% and 15 in the Government Infectious Diseases Hospital with no deaths. The remainder were treated in their own houses, some with the permission of, some without the knowledge of the Sanitary Authorities.

19. After the 1916/1917 epidemic in an attempt to induce the people to notify cases and to stop the practice of dumping their dead in the streets at night, the Sanitary Board with the approval of the then M.O.H. passed the following resolution:—

“That patients suffering from Small-pox be allowed to be treated in their own houses under the following conditions:—

- (a) That all cases in the District be notified to the Medical Officer of Health.
- (b) That all inmates of the house be vaccinated.
- (c) That a notice be posted on the door of the house where the patient is being treated”.

The results did not come up to expectations for the populace ignored the so called concession and continued in their practice of concealing cases and dumping corpses.

20. In this epidemic many a case was notified to the M.O.H. for the first time when the Medical Officer in charge of the Mortuary reported the presence of a corpse dead of the disease.

21. In December the Public were reminded of the Board's concession by notices in the Press and the distribution of

pamphlets. The result was not encouraging for there was no sign of any increased inclination to report cases and the dumping of bodies continued unabated.

22. Isolation of the sick and disinfection and surveillance of contacts being impossible, vaccination was practically the only means of combating the epidemic.

23. Fortunately the Chinese are not adverse to vaccination. They only resort to it, however, in large numbers when Small-pox is epidemic. The Government employ 12 public Vaccinators who work under the Health Officer of the Port and are also available for employment wherever the Medical Officer of Health may consider their services are most required. In addition vaccination is available, free of charge, at all Government and Chinese Hospitals and Dispensaries.

24. In November it was decided to accept the offer of the Assistant Commissioner of St. John's Ambulance Brigade to conduct a vaccination campaign as had been done in previous epidemics. Each member of the Brigade was instructed in vaccination by the divisional Surgeons and when pronounced proficient his name was gazetted as a Public Vaccinator for the period of the emergency. In this way 179 members of the Brigade were gazetted. Booths were opened in the streets and markets and in less than six weeks 191,372 persons were vaccinated.

25. In addition to this 66,840 vaccinations were performed by the Public Vaccinators and at Hospitals and Dispensaries making a total of 258,212. A considerable number of vaccinations were also done by private practitioners which were not recorded.

26. Great difficulty was experienced in obtaining permission to vaccinate young children. There appears to be a belief that children should not be vaccinated before they are six months of age. The Ordinance provides for vaccination "within six months from the date of birth"; for some reason not readily understood this has been interpreted to mean that vaccination need not take place until the child is six months old.

The fact that 70% of the deaths were in children under 5 years of age shows the unvaccinated state of the child population.

Failure to vaccinate between the months of May to September inclusive is not punishable though why there should be this off season is not clear.

27. The constant movement of population into and out of the Colony (some 4,000 per diem) renders it difficult to maintain an immune population.

28. *Plague*.—Four cases of bubonic plague occurred with two deaths. These are the first cases of either human or rat plague which have been reported since September 1923. All came from the Eastern District of the City of Victoria. The first two cases were reported on May 4th. They both occurred on the same floor of a good type tenement house which was used for residential purposes only. The third case was reported on June 23rd and the fourth on July 23rd. No dead rats were found and no infected rats were reported from this or any part of the Colony. House to house cleansing was carried out.

29. *Rat Flea Survey*.—With the object of starting a rat flea survey arrangements were concluded with the Head of the Sanitary Department for a number of wire cage traps to be set in various parts of the city, so that rats caught should remain alive until dealt with by the investigator. Experience had shown that rats found on bird-line traps (the kind usually set) were dead when collected and free from fleas.

30. The collection and differentiation of the fleas was until June under the supervision of Dr. T. W. Ware after which time Dr. H. A. Fawcett carried on the work. The total rats examined was 259 and the number of fleas found was 1,330. The following Table shows details of the results obtained:—

<i>Species.</i>	<i>No. found.</i>	<i>Average per rat.</i>
Xenopsylla Cheopis	1,249	4.82
Leptopsylla Musculi	59	0.23
Ctenocephalus	18	0.07
Pulex	4	0.01

The number of rats examined is too small for definite conclusions to be drawn but it is hoped that a continuation of the survey may throw light on the epidemiology of plague.

31. The absence of Plague from Hong Kong for so many years may be due to the sanitary measures which have been and are being taken, but it has apparently also disappeared from Canton and South China generally where similar measures have not been in use.

32. *Enteric*.—The number of cases reported was 240. All the cases were sporadic and as is usual in such the source of infection could not be traced. There are of course a number of possible sources of infection included among which are raw vegetables grown by the Chinese method, foods and drinks contaminated by infected water, adulterated milk, flies, etc., etc. There is no evidence that any case contracted this disease through the public water supply.

33. *Helminthic Diseases*.—(c) The Hospital returns show 72 cases of ankylostomiasis, 5 cases of cestodes and 91 cases of ascaris infection.

B. VITAL STATISTICS.

34. Births and Deaths registration which was established by Ordinance No. 7 of 1896 as amended by Ordinance No. 26 of 1923 applies to the Colony only. There is no registration in the New Territory.

35. The Registrar of Births and Deaths is the Head of the Sanitary Department, a Senior Cadet Officer. The Assistant Registrars are the Officers in Charge of various Police Stations, the Inspector in Charge of the Disinfecting Station Kowloon, and the Principal Clerks in Charge of the various Chinese Public Dispensaries.

36. Births are registered at the Central Office in Victoria, at the Chinese Public Dispensaries and at the Police Stations at Aberdeen and Stanley.

37. Deaths can be registered at the Central Office, at the Kowloon Disinfecting Station and at a number of Police Stations.

38. Death registration being a necessary preliminary to a permit for burial it may be taken for granted that practically all deaths are registered. Bodies found dumped, and they are not a few, are taken to the Public Mortuaries where they are examined by the Medical Officer in charge who fills out death certificates and forwards them to the Registrar.

39. Birth registration is not universal and a considerable number of births especially those of females are never reported to the Authorities.

40. Death certificates are scrutinised by the Medical Officer of Health attached to the Sanitary Department.

41. *Population*.—The estimated population for the whole of the territories under British jurisdiction was 1,075,690.

42. The estimated population for the Colony was:—

<i>Non-Chinese</i> mostly resident in Hong Kong and Kowloon	18,150
<i>Chinese</i> City of Victoria	550,000
Villages of Hong Kong	43,890
Kowloon & New Kowloon ..	264,000
Junk & Sampan population.	103,400
	<hr/>
Total Chinese	961,290
	<hr/>
Total Civilian population Chinese and non-Chinese	979,440
	<hr/> <hr/>

The estimated population for the New Territories was 96,250.

43. During the year 730,570 persons entered and 677,941 left the Colony by river steamer and by railroad making a balance of immigrants over emigrants by these routes of 52,629.

44. *Births*.—The births registered as having occurred in the Colony were:—

Chinese	8,973
Non-Chinese	336
TOTAL	<u>9,309</u>

45. *Deaths*.—The deaths among the civilian population were:—

Chinese	14,553
Non-Chinese	182
TOTAL	<u>14,735</u>

The crude death rate for the year for the total population was 15.06, that for Chinese was 15.14, that for non-Chinese 11.20.

46. The following table gives the deaths from the principal diseases causing deaths:—

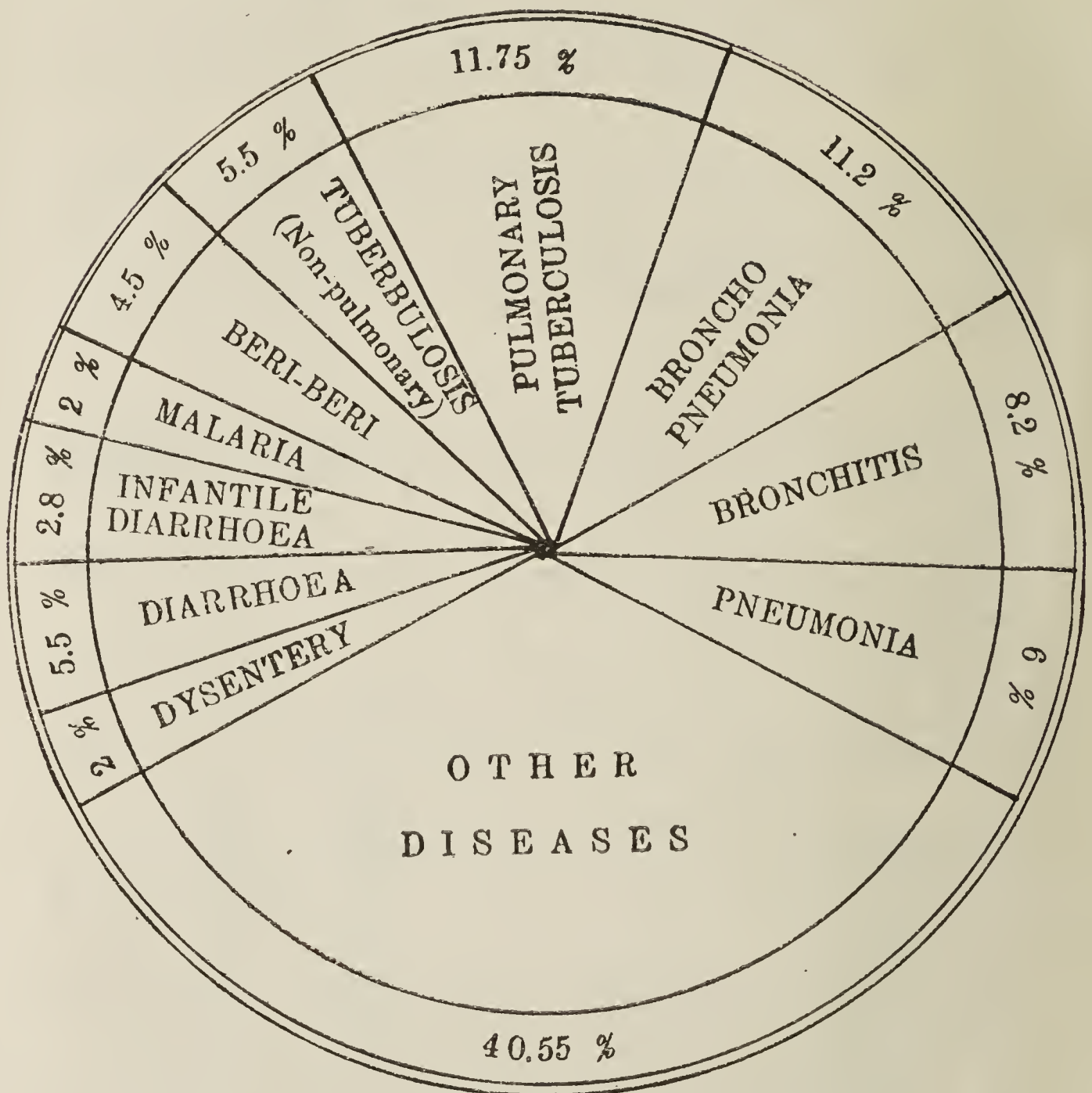
	<i>No.</i>	<i>Percentage of total deaths.</i>
Pulmonary Tuberculosis	1,731	11.75
Tuberculosis other than pulmonary	806	5.5
Broncho-pneumonia	1,651	11.2
Bronchitis	1,396	8.2
Pneumonia	898	6.
Beri-beri	667	4.5
Malaria	295	2.
Diarrhoea (infantile)	395	2.8
Diarrhoea	809	5.5
Dysentery	291	2.
Heart Disease and Heart Failure	280	1.9
<i>Deaths from notifiable diseases.</i>	<i>No.</i>	<i>Percentage.</i>
Small-pox	304	2.07
Enteric	74	0.5
Diphtheria	27	0.18
Cerebro Spinal Fever	16	0.10
Plague	2	0.014

47. The number of Deaths under one year was:—

Chinese	4,338
Non-Chinese	21
TOTAL	<u>4,359</u>

If the figure for Births notified represented the total births in the Colony the infantile mortality figure would be 458. This figure is obviously much too great but there can be no doubt that the true rate is a high one.

48. *Death Clock* showing percentages of total deaths caused by different diseases:—



49. *General European Population*.—The number of European Civilians resident in the Colony is estimated at 9,000. This number includes Americans, Canadians, Australians and others of pure European descent.

50. As the majority of European Civilians, both Officials and non-Officials, are treated by Private Practitioners when they fall ill and as only infectious diseases are notifiable, there are no figures available for calculating the incidence rates of different diseases among them. The number of deaths recorded was 103 giving a death rate of 11.44 per mille.

51. *European Officials*.—The European Civilian Officials number altogether 655; allowing a 20% leave margin the average number resident in the Colony is 524.

52. Most of the Officers when sick are treated by Private Practitioners; sickness Statistics are not available.

There were 13 cases of invaliding.

There were 5 deaths.

SECTION III.

HYGIENE AND SANITATION.

1. The principal Ordinances which have effect in matters of Hygiene and Sanitation are:—

- (a) The Summary Offences Ordinance.
- (b) The Public Health and Buildings Ordinance.
- (c) The Water Works Ordinance.
- (d) The Sale of Food and Drugs Ordinance.

2. The Police are responsible for action under (a), the Public Works Department for action under the building sections of (b) and for (c), while the Sanitary Department deals with the public health side of (b) and with (d).

3. The Sanitary Department which is distinct from the Medical Department has at its head a Senior Cadet Officer whose title is Head of the Sanitary Department (H.S.D.). The European Staff under his administrative supervision includes:—

- (1) Two Medical Officers of Health (Seconded from the Medical Department).
- (2) Two Veterinary Surgeons.
- (3) Fifty-three Sanitary Inspectors.

4. There is a Sanitary Board composed of Officials and non-Officials, whose powers and responsibilities are laid down in the Public Health and Buildings Ordinance, which acts as an adviser to the H.S.D. and of which the H.S.D. is the Chairman. This body has no direct control over the Sanitary Staff.

The functions and control of the Sanitary Board and Sanitary Department as determined by the Public Health and Buildings Ordinance are limited to:—

- (a) the Island of Hong Kong, (b) the Peninsula of Kowloon, and (c) that portion of the new Territory which is adjacent to Kowloon and which is known as New Kowloon.

5. The Director of Medical and Sanitary Services, who is adviser to Government on all medical and sanitary matters, confers with the H.S.D. but has no status under the Public Health and Buildings Ordinance and no authority over any of the staff of the Sanitary Department.

6. The following general review of work done and progress made in matters of sanitation is based on facts contained in the Annual Report of the Sanitary Department which is issued independently by the Head of the Sanitary Department.

A. ADMINISTRATION.

1. For purposes of sanitary administration the Island and the Peninsula have been divided into local sanitary areas, each with a sanitary office, and these in turn have been sub-divided into Health Districts each of a size convenient for supervision by a Sanitary Inspector.

2. The built over portions of Hong Kong constitute only 1/5th of the total area. On the North side is the City of Victoria which occupies the flats and lower slopes facing the Harbour. Behind and above the City is the Residential area of the Hill District extending up to and including the crest called "the Peak". The great mass of the population, (500,000), which reside in the City, are crowded into an area which does not exceed one square mile in extent.

On the South side and near the sea level are the villages of Aberdeen, Aplichau, Stanley and Tai Tam.

The remainder of the Island (four fifths) consists of steep slopes without habitations.

3. The Peninsula of Kowloon may be described topographically as consisting of a central group of hills surrounded on three sides by flats which intervene between them and the sea coast. The bulk of the population (250,000) live in tenement houses on the flats.

New Kowloon is an extension northwards of the flats on the western side.

4. The City of Victoria is divided into Eastern-central, Western-central and Western Districts, each with a sanitary office and sub-divided into 12 Health Districts each with a Sanitary Inspector in charge. The Hill District is worked in connection with Health District 3. One Sanitary Inspector is in charge of all the villages on the South side of the Island.

Kowloon is divided into Kowloon Peninsula, New Kowloon and Kowloon City (Old Chinese walled City), each with a sanitary office and sub-divided into seven Health Districts with a Sanitary Inspector in charge of each.

PREVENTIVE MEASURES—(a) *Mosquito and Insect-borne Diseases.*

1. Anti-Mosquito work has not yet reached a high level in Hong Kong. All the Inspectors can distinguish between an anopheline and a culicine but progress beyond this stage has not been attempted. There are no special Mosquito Inspectors and the Anti-Mosquito Brigade consists of two Overseers and a number of Oiling Coolies.

The relative dangers of different collections of water has yet to be worked out. This is a very important matter for on its solution depends to a great extent the economics of preventive measures.

2. "The routine work of oiling pools and inspecting dwellings for breeding places was carried out by District Inspectors, and by two foremen with coolies specially employed. Full use was made of the powers given by the bye-law for the prevention and dissemination of diseases by Mosquitoes. The usual cutting of undergrowth in May and October was carried out in conjunction with the Botanical and Forestry Department and the Military Authorities (as regards Military Lands.')

EPIDEMIC DISEASES—(b) *Preventive Measures Against Plague.*

1. In the campaign against Plague the routine measures, which had been in vogue since the disease was at its height, were continued. These were:—

- (1) Periodical cleansing of premises and lime washing.
- (2) Abolition of refuges for Rats, such as Ceilings, Stair-linings and panelling.
- (3) Destruction of Rats.

2. Twenty-eight members of the Cleansing Staff were employed during the year, setting traps, bird-liming boards, distributing poison (barium carbonate), and collecting Rats from the many special Rat Reception Boxes which had been placed in convenient situations throughout the City.

By far the greatest number of Rats were taken dead from the Rat Reception Bins where they had been dumped by the Chinese who had either killed them or picked them up dead; as many as 2,500 Rats per week were collected from these boxes. The total number of Rats collected were 28,310 of which only 259 were caught alive. All Rats collected were sent to the Public Mortuaries where they were examined by the Medical Officer in charge. During the year no plague infected Rat was reported.

More Rats were caught on boards smeared with bird-lime than in traps. Rats so caught are generally dead when found—and of course free from fleas.

3. The M.O.H. Dr. Fawcett examined a number of fleas taken from Rats caught alive and identified the species. The researches which commenced in April were still in progress at the end of the year.

The following Table shows the results obtained:—

Total Rats searched	259
Total fleas found	1,330

<i>Species.</i>	<i>No. found.</i>	<i>Average per Rat.</i>
Xenopsylla Cheopis	1,249	4.82
Leptopsylla Musculi	59	0.23
Ctenocephalus	18	0.07
Pulex	4	0.01

The maximum number found on any one Rat was 57, the number of Rats on which no fleas were found was 68.

The Cheopis Index was highest in June and lowest in April.

Preventive Measures Against Small-pox.

1. "Under the Vaccination Ordinance, all Public Vaccinators are under the control of the Director of Medical and Sanitary Services who is Superintendent of Vaccination". As Registrar of Births and Deaths, the Head of the Sanitary Department is responsible for ensuring the vaccination of all children whose births are registered.

Vaccinations were performed by:—

- (a) the Public Vaccinators.
- (b) the M.O's in charge of Government Hospitals.
- (c) the M.O's in charge of Chinese Hospitals.
- (d) the M.O's in charge of Chinese Public Dispensaries.
- (e) 179 members of St. John's Ambulance Brigade under the Assistant Commissioner.

Altogether 258,212 Vaccinations were performed.

Preventive Measures Against Cholera, Dysentery and Enteric.

1. The usual routine measures against the spread of bowel disease continued to be taken—viz—purification of the Public Water Supplies, closing of Wells.

Preventive Measures Against Tuberculosis.

1. The measures taken against Tuberculosis were:—

- (a) Periodical general cleansing of premises.
- (b) Action taken to prevent the erection of unauthorised cubicles especially those which have defects in the matter of light and air.
- (c) Action by the Building Authority to ensure the erection of houses having a proper supply of lighting and ventilation.

(c) *Preventive Measures Against Helminthic Diseases.*

1. There was no routine campaign. Whatever be the percentage of the population which carry ankylostomes very few cases of ankylostome anaemia come under the notice of the Hospital Authorities.

GENERAL MEASURES OF SANITATION.

1. *Sewage Disposal.*—The collection and disposal of night soil in the Colony is carried out, partly by the bucket system, partly by water carriage.

2. Regarding the bucket system—arrangements are made with a contractor for the removal and disposal of excrement under conditions laid down by the Sanitary Board. Human night soil is a valuable commodity in China where it is used as a fertiliser for the fields, and there is no difficulty in securing contractors who will pay a considerable sum for the sole right of removal. Under a Contract made in January 1928, the Contractor pays \$12,220 per annum to revenue for the Contracts for Victoria and Kowloon. Revenue from this source is gradually diminishing owing to the substitution of water closets for pail closets.

The excrement is removed by night from the latrines to a special fleet of junks which convey it up river to China where it is utilised as manure for the mulberry trees on which the silk worms feed.

3. Owing to the limitations of the water supply on the Island and the need for economy in the matter of consumption, it is necessary to restrict the number of water closets served by the public mains. Where a sufficiency of water can be obtained from other sources such as wells or nullahs, water closets are allowed. With regard to effluents, some enter the public sewers direct, others pass to biological tank systems to be treated before final discharge.

1. *Scavenging—Refuse Disposal.*—Scavenging, which used to be done by contract, is now carried out departmentally. There are 15 refuse lorries in use, 11 for Hong Kong and 4 for Kowloon. Two hundred and fifty-four tons of refuse were collected daily and removed to the various refuse depots. The bulk of the refuse is ultimately taken away by barges and dumped in the sea.

1. *Drainage—(Subsoil and Surface).*—Drainage, both subsoil and surface, is controlled by the Public Works Department.

1. *Water Supplies.*—The water supplies of Hong Kong and Kowloon are in charge of the Water Works Branch of the Public Works Department.

2. All the water is surface water collected from catchment areas which are free from ordinary risks of pollution.

3. The water, after storage for a longer or shorter period in the impounding reservoirs, is filtered, in some cases by the slow sand system in others by the rapid system and finally chlorinated.

4. Routine examinations are carried out by the Government Bacteriologist and Government Analyst and the results furnished to the Water Authority. There was no evidence of any disease having been conveyed through the public water supplies.

1. *Clearance of Bush and Undergrowth.*—Generally speaking, in Hong Kong and the New Territory, bush and undergrowth is little in evidence except in those places where it has been planted and conserved. Routine cutting of superfluous undergrowth is carried out in May and October.

2. In Hong Kong, as in many other parts of the world, there appears to be a general belief that the cutting of undergrowth and the clearance of bush in some way brings about a diminution in the number of mosquitoes especially the species which carry malaria. Whatever may be the effect on culicines it is a fact that the very potent malaria carriers—*Anopheles Maculatus* and *Anopheles Minimus* breed in water open to the light and shun that shaded by trees or undergrowth. Clearance of bush may, therefore, result in an increase of malaria rather than in a diminution.

1. *Sanitary Inspectors.*—During the year the Sanitary Inspectors continued their routine visits of inspection. Under their supervision 96,875 floors were cleansed in Hong Kong and 55,710 in Kowloon. This means that practically all premises were cleansed twice during the year. Lime washing was done on 44,849 floors.

SCHOOL HYGIENE.

1. The School Inspection Branch of the Medical Department consists of one Lady Medical Officer and one Nurse. These Officers work in close touch with the Education Department.

2. The following information is taken from the Annual Report of the School Medical Officer.

3. The average number of pupils daily attending Government Schools and Schools which receive Government grants in aid was 7,889.

<i>Type.</i>	<i>Government Schools.</i>		<i>Average Attendance.</i>
	<i>Number.</i>	<i>Nationality of Pupils.</i>	
British	5	European	337
Anglo-Chinese	11	Chinese	3,279
Indian	1	Indian	116
Total			3,732

The non-government schools receiving grants in aid number 11 of which 6 cater for Chinese only and 5 for Chinese and others. The pupils number altogether 4,257.

4. The premises of all Government and Grant in Aid Schools were inspected and attention drawn to defects. Various improvements in sanitation were made during the year chiefly in the direction of lighting, ventilation and air space.

5. Such is the number of pupils that it was only possible to examine the “entrants” and the specials.

Among the 1,111 “entrants” examined 1,616 defects were found. The principal defects noted were:—nasal troubles 27%, vision 10%, other eye troubles 7%, heart disease 14%, tonsils and adenoids 9.5%, suspected tuberculosis 6.5%, dental cases 5%, deformity 4.5%, skin diseases 1.5%.

With regard to eye defects—myopia accounted for 75% of the totals.

6. *Treatment.*—There are no School Clinics—cases of errors of refraction were seen by Dr. Morrison at his Clinic and examinations made. With regard to other defects, free treatment was offered at the Government Hospitals and at the Chinese Public Dispensaries—most children however attended once only.

7. *Infectious Diseases.*—The M.O.H. notified the School Medical Officer of any school cases certified by him. Among the pupils there were 37 cases of Whooping Cough, 9 of Chicken-pox, 2 of Diphtheria, 2 of Mumps and 1 of Enteric.

LABOUR CONDITIONS.

1. The general industrial conditions continued to improve and the labour situation was normal. There are no estates, plantations or mines in the Colony. Practically all the labouring class are engaged in matters connected with commerce, shipping or public works.

2. Labourers find their own accommodation in the many tenements and lodging houses which exist in Hong Kong or Kowloon.

3. What factory regulations there are are administered by the Secretary for Chinese Affairs.

4. There are no special arrangements for the medical care of labourers other than the Government Hospitals, the Chinese Hospitals, the Mission Hospitals and the Chinese Public Dispensaries. The total number of beds available for general diseases is 830 making a proportion of:—

$$\frac{830}{1,000,000} \text{ or } 1 \text{ to } 1,200 \text{ approximately.}$$

HOUSING AND TOWN PLANNING.

1. There is no Town Planning Ordinance and Housing comes under that portion of the Public Health and Buildings Ordinance which is administered by the Public Works Department.

2. By inter-departmental arrangements the Medical Officer of Health scrutinises the plans of new buildings.

FOOD IN RELATION TO HEALTH AND DISEASE.

1. *Inspection and Control of Food Supplies.*—The laws dealing with this subject is the Public Health and Buildings Ordinance and the Sale of Food and Drugs Ordinance.

2. The authorities responsible under these Ordinances are the Sanitary Department and the Police Department. The Officers authorised to take samples are, “any sanitary inspector or inspector of weights and measures, or inspector of markets, or any Officer of Police acting under the written instructions of the Secretary of the Sanitary Board, or of the Captain Superintendent of Police, or of the Medical Officer of Health”.

Under the Ordinance the certificate of the Government Analyst or any analyst is acceptable as evidence by the court—but the term “analyst” is not defined.

3. During the year the following samples were taken under the Sale of Food and Drugs Ordinance—milk 68, bread 81, flour 46, butter 32, cheese 10, coffee 35, tea 28, sugar 50, lard 17,

vinegar 6, pepper 25, jam 7 and tinned milk 28. Prosecutions were undertaken in 6 cases where the samples failed to satisfy the local requirements.

Under section 82 of the Public Health and Buildings Ordinance, 56 tins of condensed milk and 8 cases of sardines were seized and destroyed by order of the Head of the Sanitary Department.

1. *Deficiency Diseases*.—The only information available regarding deficiency diseases is furnished by the returns of the Government Hospitals and Chinese Hospitals—and the death returns. The Hospitals deal with only a small proportion of the sick and the truth as regards the incidence of disease among the masses cannot be deduced from their returns. The death returns are also misleading in that the majority of cases were not treated by competent physicians prior to death, and the Medical Officer examining the body and forming a diagnosis had no history to assist him in coming to a conclusion as to the cause of death.

2. *Beri beri*.—Despite the fact that the staple food of the masses is polished rice, beri beri is not epidemic—and the deaths from this disease formed only 4.57 per cent of the total deaths. The death rate as far as it can be ascertained was 0.62 per mille population. The total number of deaths recorded during the year was 665. The total number of cases treated in the Government Hospitals was 29 only.

3. *Rickets*.—Only four cases were treated in the Government Hospitals. Most Chinese Infants are breast fed until they are at least a year old. Rickets is seldom mentioned as a cause of Infant death.

4. *Pellagra*.—No cases were treated in the Government Hospitals.

5. *Scurvy*.—Only two cases were treated in the Government Hospital.

1. *Markets*.—The markets come under the Sanitary Departments. The Central and Western Markets are supervised by a special Overseer who is responsible to the Veterinary Surgeon; the other markets are supervised by the District Sanitary Inspectors.

1. *Slaughter Houses*.—Slaughter Houses and Animal Depots are controlled by the Sanitary Department. There is a Government depot at Kennedy Town (Hong Kong) for the reception of all cattle, sheep, swine and goats brought into the Colony for slaughter. The Government Slaughter Houses are situated at Kennedy Town (Hong Kong) and at Ma Tau Kok (Kowloon). There are Government controlled slaughter houses at Aberdeen and Sai Wan Ho.

2. The Government depot and slaughter houses are under the direct charge of the Colonial Veterinary Surgeon and Asst. Colonial Veterinary Surgeon and a staff of four Inspectors.

1. *Dairies*.—There is a model Dairy-farm in Hong Kong where milk is produced by stall fed cattle under hygienic conditions.

B. MEASURES TAKEN TO SPREAD THE KNOWLEDGE OF HYGIENE AND SANITATION.

1. With only two Medical Officers of Health to one million population the opportunities for establishing and maintaining an extensive propaganda campaign are not bright—and comparatively little has been done.

C. TRAINING OF SANITARY PERSONNEL.

1. The Medical Officers of Health hold classes and give lectures to the Sanitary Inspectors but there is no regular school for teaching such as exists in Singapore.

SECTION IV.

PORT HEALTH WORK AND ADMINISTRATION.

1. Reckoned in terms of shipping-tonnage, Hong Kong is one of the five greatest ports in the world. It is the principal commercial entrepôt of Southern China and it is the terminus of the Steamship Lines running between China, Japan and North America.

2. In 1928, 4,513 British ocean-going steamers and 7,370 foreign ocean-going steamers entered and cleared the harbour. In addition there were 7,852 river steamers and 24,000 foreign trade junks. The total tonnage of vessels entering and clearing was 44,883,765.

3. The Medical Staff engaged in Port Health duties consist of two European Health Officers and two Chinese Medical Officers.

4. The work of the department includes:—

- (a) Routine inspection of ships.
- (b) Quarantine duty.
- (c) Duty in connection with emigration.
- (d) Vaccination.

5. The laws dealing with the subject of Quarantine and Port Health are contained in Table I. of the Hong Kong Port Regulations, the Asiatic Emigration Ordinance and the Vaccination Ordinance.

6. During the year 5,932 inward bound ocean-going vessels were boarded by the Health Officers. Of these 2,252 were on the British register and 3,680 on the Foreign register.

River steamers from Canton, Macao and West River Ports, also junks and small crafts were only visited when cases of sickness or death were reported.

Quarantine.

7. Hong Kong has no quarantine station for ships' passengers or crews. When segregation is necessary it is carried out on board ship at the quarantine anchorage. A limited number of infectious cases can be accommodated at the Government Infectious Diseases Hospital at Kennedy Town—but there is little room for contacts.

8. During the year 4 ships were detained in quarantine; in all cases the cause of detention was Small-pox.

All vessels arriving from "infected" ports and those having infectious or suspicious cases on board fly the "Q" flag and go to the quarantine anchorage for examination.

9. The number of vessels arriving in quarantine was 307 with 20,360 passengers and a crew personnel of 23,031. All were examined and those from Small-pox infected ports were vaccinated. Where necessary medical supervision of passengers and crews was carried out before pratique was granted.

10. The total number of persons medically inspected during 1928 was 369,024 or an average of 1,011 examinations a day.

11. One hundred and forty-six vessels were fumigated during the year. Fumigations are carried out by a private company but each operation is supervised by a Health Officer.

Emigration.

12. The Asiatic Emigration Ordinance No. 30 of 1915 requires that emigrant ships shall have:—

- (1) Proper and sufficient living accommodation.
- (2) Proper and sufficient sanitary requirements.
- (3) Proper and sufficient hospital accommodation.
- (4) A sufficient supply of drugs, medical equipment and disinfectants.

It also makes provision for:—

- (1) A proper diet scale.
- (2) The prevention of the export of the unfit.
- (3) The prevention of the export of infectious disease.

The Vaccination Ordinance 1923 requires that all emigrants from the Colony shall be protected against Small-pox by vaccination.

13. The duty of carrying out the sanitary and medical inspection and for vaccinating those who are insufficiently protected falls on the Port Health Authorities.

14. Emigrants are classified as:—

- (a) “Free emigrants” or those who pay their own passages.
- (b) Assisted emigrants or those whose passages are paid by their prospective employers.
- (c) Women and children.

15. The total number of emigrants examined during the year was 263,854 of whom 246,782 were free and 17,072 assisted.

The number of rejections was 870.

The number emigrating in 1928 was less than that emigrating in 1927 by 14,891. Emigration from the port of Hong Kong has increased each year since 1919, this being the first year in which a decrease has occurred.

The great majority of emigrants proceeded to the Straits Settlements.

16. The list of drugs required was revised and brought up-to-date during the year.

Vaccination.

17. The Government Vaccinators are members of the Port Health Staff and work under the general supervision of the Port Health Officer. They are detailed for work at various centres and they assist where needed.

18. The number of vaccinations performed by these Officers at the centres were 88,036 of which 9,599 were emigrants. To these must be added the vaccinations performed on board ship of those who in the opinion of the examining officer were insufficiently protected.

SECTION V.

MATERNITY AND CHILD WELFARE.

Ante-Natal and Infant-Welfare Centres.

1. The Tsan Yuk Hospital maintains an ante-natal and Infant-welfare clinic. The number of babies brought to this centre was 504 and the total number of visits was 3,185.

Another clinic is maintained at the Alice Memorial Maternity Hospital where the visits made for ante-natal purposes or with Infants amounted to 434.

Infants are treated at the Out-patient Departments of the various Hospitals and at the Chinese Public Dispensaries.

Midwives.

1. Under the Midwives Ordinance of 1910 "no one whose name is not on the Midwives Register may practice midwifery habitually for gain or describe herself as one specially qualified to carry on the work of a midwife".

2. Training Schools for Midwives have been established at the Alice Memorial Maternity Hospital, the Tsan Yuk Hospital and the Government Civil Hospital. The course of study necessary to qualify for the examination is two years. Examinations are held two or three times a year by examiners appointed by the Midwives Board.

During 1928, 15 Candidates satisfied the examiners and were registered.

The total number on the register at the end of 1928 was 183.

3. There are seven Midwives on the Government Medical establishment whose services are free to those who cannot afford to pay a fee. Four of these are stationed in the New Territory, two do duty in connection with the Chinese Public Dispensaries and one is attached to the Alice Memorial Hospital. All with the exception of the last are supervised by a Government Lady Medical Officer.

During the year 1,115 cases were attended by the Government Midwives.

Maternity Hospital Accommodation.

1. The total hospital accommodation in the Colony for maternity cases is 205—and the number delivered in hospitals was 8,172:—

<i>Hospital.</i>	<i>Beds.</i>	<i>No. of cases.</i>
Government Civil	20	776
Victoria	33	67
Tsan Yuk	57	1,326
Wanchai	22	1,029
Tung Wah	17	1,896
Kwong Wah	30	2,589
Alice Memorial	18	459
Matilda	8	30
	<hr/>	<hr/>
TOTAL	205	8,172
	<hr/>	<hr/>

The Maternity Pavilion at the Government Civil Hospital.

1. The Maternity Pavilion accommodating 20 beds, the majority of which are at the disposal of the Professor of Obstetrics, University of Hong Kong, is mainly for the use of Asiatic women.

There are a few private rooms for the treatment of better class Chinese, Japanese, and Portuguese patients. Europeans, as a rule, find accommodation in Victoria Hospital.

2. The admissions during the year were:—

Europeans	10
Indians	35
Other Asiatics	731
	<hr/>
TOTAL	776
	<hr/>

One hundred cases had to be refused admission owing to lack of vacant beds.

The number of cases treated in 1927 was 686.

The Victoria Maternity Hospital.

1. The number of beds in this Hospital is 33.
2. There were 67 admissions during the year (63 in 1927). In June the Hospital was made available for private patients who wished to be attended by their own doctor. Only six patients availed themselves of the privilege.
3. There were two deaths—one from eclampsia, and one from shock following difficult labour terminated by caesarean section.
4. There were six patients remaining in Hospital at the end of the year.

CHINESE MATERNITY HOSPITALS.

1. There are two Chinese Maternity Hospitals which are organised on the lines of the Chinese Public Dispensaries—that is to say—they are upkept by public subscriptions and governed by a Chinese Committee of Management.

The Tsan Yuk Maternity Hospital (57 beds).

1. The whole of the in-patients work of this Hospital is in the hands of Dr. R. E. Tottenham, Professor of Obstetrics to the University of Hong Kong.
2. Once a week the Assistant Visiting Medical Officer to Chinese Hospitals and Dispensaries Dr. (Mrs.) Dovey conducts an Infant Welfare Clinic for babies born in the Hospital.
3. In connection with this Institution is a training school for midwives and nurses. The course is three years.
4. The total number of deliveries was 1,326. In the gynaecological department 174 cases were treated as in-patients and 1,105 as out-patients.

The Wanchai Maternity Hospital.

1. This Hospital of 22 beds is connected with the Wanchai Public Dispensary. A Western trained Chinese Doctor is in charge.
2. The number of deliveries in this Institution has steadily increased from 194 in 1919 to 1,029 in 1928.

SECTION VI.

HOSPITALS, INSTITUTES, ETC.

1. The Government Hospitals are:—the Government Civil Hospital, the Victoria Hospital, and the Kowloon Hospital. The Peak Hospital is an institution maintained by Government as a nursing home where patients can be treated by their own doctors.

GOVERNMENT CIVIL HOSPITAL.

1. Dr. D. J. Valentine, M.C. was in charge till his departure on leave on 6th May, 1928. The post was then filled by Dr. J. R. Craig till his departure on sick leave on 23rd June, 1928 when Dr. T. W. Ware took over the duties of Medical Officer in charge, assisted by Dr. G. H. Thomas.

Dr. T. Z. Bau was appointed Assistant Medical Officer in July.

2. The new admissions to hospital (exclusive of the Maternity Block and Mental Hospital) were 4,995. (4,698 in 1927).

3. The daily average of in-patients was 175. (188 in 1927). Nationalities of patients treated:—

European	458
Indian	1,012
Other Asiatics	3,525
	<hr/>
TOTAL	4,995
	<hr/> <hr/>

In-patients treated by the University Medical Staff:—

Gynaecological	133
Surgical	425
Medical	728
	<hr/>
TOTAL	1,286
	<hr/> <hr/>

In-patients treated by the Government Medical Officers—
3,709.

The Males numbered	4,009
The Females numbered	986
	<hr/>
TOTAL	4,995
	<hr/> <hr/>

A large proportion of the third class patients were treated free of charge.

4. *Deaths*.—390 patients died and of these 173 died within 24 hours of admission. 164 pauper Chinese patients were given free burial by the Tung Wah Hospital Authorities. The death rate was 78.08 per thousand as compared with 88.54 in 1927.

5. 1,095 major operations were performed. (University Clinic 806, Government Staff 289).

6. A detailed list of the number of cases and deaths of each particular disease is given in the Appendix. A few of these call for special comment. There were no serious epidemics of any magnitude.

7. *Diphtheria*.—Out of 22 cases, there were 14 deaths. This high mortality is due to the fact that the majority of the cases were not brought for treatment till the disease was well advanced.

8. *Malaria*.—There were only 273 cases, as against 390 in 1927.

9. *Syphilis* (acquired).—154 cases, as against 94 in 1927.

10. *Gonococcal Infections*.—215 cases, as against 103 in 1927.

The increased number of venereal cases was probably due to the fact that a special Venereal Diseases Clinic was begun in February 1928. The figures for this Clinic are given separately in the Appendix. Many patients attending this Clinic were admitted to Hospital for treatment.

11. *Diarrhoea and Enteritis* in children under 2 years. 42 cases, and 11 deaths.

12. *Accidents*.—867 cases were of a serious nature, necessitating in-patient treatment.

13. *The Police Force*.—The total number of admissions was as follows:—

		<i>Deaths.</i>	
Europeans	..... 133	1	Pulmonary tuberculosis.
Indians	..... 592	2	Do.
Cantonese	..... 157	Nil.	
Wei-hai-wei	..... 83	Nil.	
TOTAL		965.	

14. Government Servants were attended to daily, as Out-patients, between the hours of 9.00 a.m. and 10.30 a.m. The daily average was 25.

15.—*Out-Patient Department*.—This department is open both morning and afternoon. The work is entirely in the hands of the University Staff, except for the V.D. Clinic which is under a Government Medical Officer. The number of attendances was 56,947 (35,962 in 1927) exclusive of V.D. cases. In addition 9,298 patients attended for dressings.

It will be seen from this that the number of cases has increased enormously.

The Out-patients received medicines and dressings free of charges. Teaching clinics were held at certain hours.

The number of prescriptions dispensed was 36,145, being about 100 daily and nearly 60% increase over 1927.

16. *X-Ray Department*.—Mr. Murray, Acting Radiographer was in charge of the department till October, when Dr. Farr the newly appointed Radiologist arrived in the Colony. Prior to Dr. Farr's arrival Major Morrison, R.A.M.C. Radiologist to the Military Hospital very kindly acted as consultant and was of great service to the Department.

17. Miss Siggins was appointed Masseuse and Assistant to the Department on 15th July, 1928.

18. A considerable amount of massage, ultra-violet ray treatment and diathermy-ionisation has been done. The demand for treatment in this department is increasing.

19. <i>Treatments</i> —Diathermy	178
Ultra-violet Light	1,377
Faradism and Galvanism ..	236
<i>Fees earned</i>	\$3,476
<i>Number of patients X-Rayed</i>	1,699
<i>Films Exposed</i>	2,520

20. *Maternity*.—The *Maternity Pavilion* connected with this Hospital is described under the section dealing with Maternity and Child Welfare (V.).

VICTORIA GENERAL AND MATERNITY HOSPITAL.

1. General Beds 38. Maternity Beds 33.

2. Dr. J. T. Smalley was in charge throughout the year. Dr. Ware acted as assistant for the first six months of the year, when he was appointed Medical Officer in Charge of the Civil Hospital. During the second half of the year Dr. Thomas attended on Tuesdays and Fridays to give anaesthetics. Throughout the year Dr. Kirk assisted in the surgical work of the hospital.

3. *General Block.*—In previous years the Hospital was reserved for women and children only, but as the accommodation was never fully taxed it was decided in December 1927, to admit male patients.

4. The total number of patients treated was 529 of which 194 were males and 335 females. (323 women in 1927). The nationalities of these patients were:—

	<i>Males.</i>	<i>Females.</i>
Europeans	194	313
Chinese	—	16
Japanese	—	1
Eurasians	—	5
	<hr/>	<hr/>
	194	335
	<hr/>	<hr/>

There were four deaths, the causes being sub-tertian malaria 1, appendicitis 2, hepatitis 1

5. *Operations.*—During the year 219 operations were performed under general anaesthesia. (136 in 1927).

6. *Out-patients.*—1,219 visits were made to the Out-patient Department. Of these 175 were males and the remainder women and children.

7. The maternity side of this Institution is described in the section dealing with Maternity and Child Welfare (V.).

KOWLOON HOSPITAL.

1. Dr. I. Newton was in charge during the year.

Dr. J. E. Dovey attended in the Out-patient Department.

Dr. A. D. Wong was appointed Assistant Medical Officer in July.

2. 1,204 patients were admitted as opposed to 980 in 1927, of which 1,099 were males and 105 females. The nationalities were made up as follows:—

		<i>Males.</i>	<i>Females.</i>
British	260	214	46
Chinese	825	811	14
Other Nationalities	119	74	45

1. Daily average number of patients ... 41

2. Number of Police admitted:—

<i>Europeans.</i>	<i>Chinese.</i>	<i>Indians.</i>
81	176	3

3. 40 patients were transferred to the Government Civil Hospital, 4 to the Kwong Wah Hospital, 3 to the Victoria and one each to the Victoria Gaol Hospital and Matilda Hospital. There were 57 deaths from all causes.

4. During the year 185 operations were performed under general anaesthesia.

5. There were no special epidemics during the year. There were fewer cases of malaria. During the summer months, when sickness is always more rife, the Hospital was hard pressed to find accommodation for all who sought admission.

6. *Out-patient Department*.—The number of out-patient visits recorded as compared with the previous year were as follows:—

	1927.	1928.
New Cases	6,918	9,626
Old Cases	2,067	3,482
Dressings	2,129	3,980
	<hr/>	<hr/>
TOTAL	11,114	17,088
	<hr/>	<hr/>

7. The External Diseases of the eye cases increased from 1,697 in 1927 to 4,699 in 1928 and the number of prescriptions dispensed increased from 7,848 in 1927 to 14,190 in 1928.

8. Male patients suffering from active Venereal Diseases were referred to the Venereal Diseases Clinic at the Government Civil Hospital, and women were referred to the Tsan Yuk and Kwong Wah Hospitals.

9. There is no 3rd Class accommodation in the Hospital for Chinese or Indian women.

GOVERNMENT DISPENSARIES.

1. The Dispensaries maintained by Government during the year under review were:—the Kowloon Railway Station Dispensary, the Taipo Dispensary and the Un Long Dispensary.

KOWLOON RAILWAY STATION DISPENSARY.

1. This Dispensary was closed at the end of February 1928. During the two months it was open 534 patients were treated.

TAIPO DISPENSARY—(*New Territory*).

1. During the year Dr. C. H. Luk was Chinese Medical Officer in charge. The number of visits during the year as compared with 1927 were as follows:—

	1927.	1928.
New Cases	1,689	2,386
Old Cases	1,191	1,987
Vaccination	1,316	1,677
	<hr/>	<hr/>
TOTAL	4,196	6,048
	<hr/>	<hr/>

UN LONG DISPENSARY—(*New Territory*).

1. This Dispensary—which is in charge of a dresser—is visited twice a week by Dr. Luk. The number of cases treated during the year was 4,168 as compared with 4,389 for 1927. The number of vaccinations was 485—the number for 1927 was 400.

VENEREAL CLINICS.

1. A Venereal Diseases Clinic at the Government Civil Hospital was begun in February, 1928, by Dr. Craig. Owing to his absence on leave, the full figures for the first six months of the year are not available.

2. From July to December the Clinic was taken over by Dr. H. A. Fawcett, Medical Officer of Health.

3. The Clinic was only open on Wednesdays and Fridays from 5 to 7 p.m.

4. The total number of cases treated from July to December—697 an average attendance of 36.6 on each day.

The total number of new cases was 126, of which:—

77 were Syphilis,
36 were Gonorrhoea,
13 were Chancroid.

The total revisits were 571.

5. Disease.	Europeans.	Chinese	Indians.	Other Races.
Syphilis	8	52	16	1
Gonorrhoea .	17	11	8	—
Chancroid ...	—	8	5	—
	<hr/>	<hr/>	<hr/>	<hr/>
Totals	25	71	29	1
	<hr/>	<hr/>	<hr/>	<hr/>

6. At the end of March a weekly Venereal Clinic was started at the Tsan Yuk Hospital. The cases seen totalled 144.

7. Venereal cases are seen at the Out-patient Departments of the various departments and at the Dispensaries.

THE CHINESE HOSPITALS AND DISPENSARIES.

1. *The Chinese Hospitals* (3 in number viz. 2 general and 1 for infectious diseases) are Chinese Institutions whose relation to Government has been established by Ordinance. They are subsidised by Government, are subject to inspection by certain Government Officials and each has a Chinese member of the Medical Department on its Resident Staff.

The authority in administrative control is a Committee of Chinese gentlemen elected each year by the subscribers.

2. These Hospitals were originally established to give accommodation to those Chinese whose fears and prejudices against Western Medicine prevented their applying for relief at the Government Hospitals. The Tung Wah Hospital situated in Hong Kong was first occupied in 1873. The Kwong Wah Hospital was built in Kowloon in 1911 as an extension of the Tung Wah. The Government gave the sites free and with grants of money assisted in the erection of the buildings.

The activities of the Chinese Hospitals include:—

- (a) The care of the sick and treatment by Western methods or Chinese methods according to the wish of the patient.
- (b) Maternity—benefits—and infant welfare—by Western methods only.
- (c) Assistance to the destitute.
- (d) The provisions of coffins for, and the burial of the dead.
- (e) Vaccination.
- (f) Health propaganda.

3. *The Chinese Public Dispensaries*, eight in number, were established for the purpose of supplying medical advice and treatment on Western lines. Situated in the most thickly populated districts they fulfil a very useful purpose, not only in the matter of treatment but also as foci for the spread of knowledge concerning the causes of disease, the means of spread and the value of Western drugs and methods both in prevention and cure.

Each Dispensary is controlled by a separate Committee of Chinese gentlemen who work in close touch with the Secretary for Chinese Affairs and each is in direct charge of a Chinese Medical Practitioner qualified in Western Medicine.

4. Both Hospitals and Dispensaries receive yearly grants from Government funds.

5. There are three Officers of the Government Medical Department whose whole time duty it is to visit the various Chinese Medical Institutions—both hospitals and dispensaries—and to give advice and assistance.

Dr. E. W. Kirk was the Visiting Medical Officer to the Chinese Hospitals and Dispensaries during the year. The late Dr. (Mrs.) A. D. Hickling M.B.E. was Assistant Medical Officer up till her death in September. Dr. (Mrs.) A. L. Dovey M.B., Ch.B. was appointed as second assistant on 14th March, 1928, and subsequently succeeded Mrs. Hickling. Miss P. C. Lai M.B., B.S., was appointed second assistant.

The Visiting Medical Officer is mainly concerned with the activities of the Tung Wah and Kwong Wah Hospitals, while the duties of the Assistant Visiting Medical Officers are connected with the work of the Tsan Yuk Maternity Hospital and the Chinese Dispensaries. Mrs. Dovey also succeeded Mrs. Hickling as supervisor of Government Midwives.

6. *Progress in the Chinese Hospitals.*—Much progress has been made in all departments of the Hospitals since the last report was issued in 1926. The improvements include:—

- (a) The appointment of University graduates as full-time Resident Medical Officers.
- (b) The foundation of training schools for female nurses.
- (c) Extensions and improvements in the male nursing section.
- (d) The establishment of Clinical laboratories in charge of full-time laboratory assistants.
- (e) The installation of a shadowless scialytic lamp in the operating theatre.
- (f) The provision of X-ray apparatus.
- (g) The purchase of a motor ambulance.
- (h) Improvements in the accommodation for patients.
- (i) Improvements in quarters for staff.

7. The training course for nurses is spread over three years, the first two for general work, the third for obstetrical training.

8. A few years ago Surgery in the Chinese Hospitals was almost non-existent. In 1928 there were 380 operations performed many of which belong to the category of major operations. The growth of this side of curative medicine shows the advance which has been made in the campaign against prejudice. This has been brought about by a combination of factors chief among which are the improvements which have been made in Wards and Theatres, the better nursing, the keenness of the Directors and of the Staff, and last but by no means least the stimulating influence of the Government Visiting Medical Officers.

THE TUNG WAH HOSPITAL.

1. The Tung Wah Hospital which is situated in one of the most congested areas of Hong Kong contains 400 beds.

2. The Staff consists of a Chinese Government Resident Medical Officer whose salary is paid by Government, and three Resident Medical Officers whose salaries are paid by the Hospital. There are in addition a number of Chinese Doctors who practice Chinese Medicine for the benefit of those who prefer that line of treatment.

3. The total number treated during 1928 was 198,598 of which 176,788 were treated by Chinese methods and 21,810 by Western methods. The number of in-patients was 11,486, the number of out-patients was 187,112.

Year by year the number asking for Western treatment increases showing that the benefits of up-to-date scientific methods are becoming more and more appreciated.

4. The appointment of a full-time laboratory assistant made it possible to institute routine examination of bloods, urines, faeces, etc.

5. The growing confidence of the community in the efficacy of the Maternity Department resulted in such a number of applications for admission that the wards were over-crowded. The total number delivered was 1,896 an increase of 370 over the 1927 figures. The number of maternal deaths was 14—giving a percentage of deaths to cases of 0.74.

6. The total number of operations requiring an anaesthetic was 171—many of these were major operations.

7. There is a nursing school and midwifery school in connection with the establishment.

THE KWONG WAH HOSPITAL.

1. The Kwong Wah Hospital, an Institution of 250 beds, is really an extension of the Tung Wah Charity. Situated in Kowloon it provides for that town what the Tung Wah does for Hong Kong.

2. The Western Staff consists of a Chinese Government Medical Officer paid by Government, and two Resident Medical Officers paid by Hospital Funds. All are University graduates. There are also a number of Chinese Doctors who practice Chinese Medicine.

3. Both Chinese and Western Methods are employed in treatment—the patients taking their choice. Those who prefer Chinese treatment are attended by the Chinese Doctors on the Staff, those who choose Western methods are treated by Resident Medical Officers.

In 1928 the number of in-patients was 8,822 and the number of out-patients 128,942.

4. 94 operations were performed under general anaesthesia.

5. There is a nurses training school with a matron in charge.

6. The nursing staff consists of 20 females (probationer nurses). There are 14 dressers for the male Wards.

7. There were 2,589 obstetrical cases with only two (2) deaths. At present there are 39 maternity beds—but a new maternity block of 75 beds is nearing completion.

8. There is a laboratory where chemical testing is carried out.

THE CHINESE PUBLIC DISPENSARIES.

1. The Dispensaries, eight in number, treated a total of 191,152 in 1928 as compared with 161,370 in 1927.

2. In addition to being clinics and medicine distributing depots, these Institutions serve as vaccination depots and centres where the poor may apply for assistance in matters connected with:—

- (a) the removal of patients to hospital;
- (b) certification as to causes of death;
- (c) removal of corpses to Mortuaries;
- (d) supply of coffins.

The popularity of these establishments is steadily increasing showing that the prejudice and suspicion of the conservative lower orders of the Chinese is gradually being dispelled. As propaganda centres they are very useful.

3. The Dispensary at Shaukiwan has been found too small and a new building is being erected. Plans have also been drawn up for the extension of the dispensary at Yaumati. Both these centres attract large numbers of the boating population in addition to people living in the neighbourhood.

4. Vaccination is done free at all Dispensaries. One of the Lady Assistant Visiting Medical Officers holds a gynaecological clinic at each Dispensary once a week.

5. The following Table shows the work done during the year:—

SUMMARY OF WORK DONE BY THE CHINESE PUBLIC DISPENSARIES IN VICTORIA AND IN THE KOWLOON PENINSULA.

— 49 —

Dispensaries.	Patients.		Certificate of cause of death.	Patients sent to hospital.	Patients removed to hospital by Ambu- lance.	Corpses removed to hospital or Mortuary.	Application for coffins.	No. of dead infants brought to Dis- pensary.	No. of Vaccina- tions done in Dis- pensary.	No. of Gynaeco- logical cases seen by Lady Dr.
	New cases.	Old cases.								
Central Dispensary	11,617	12,097	—	57	13	62	62	13	6,482	258
Eastern Dispensary	12,597	8,560	19	35	45	58	58	328	7,674	960
Western Dispensary	9,528	10,592	44	2	34	297	297	265	4,520	1,105
Amalgamated Harbour and Yaumati Dispensaries	28,385	28,208	90	7	79	247	—	240	13,871	1,368
Shaukiwan Dispensary	21,021	10,018	30	78	1	4	4	122	5,371	1,008
Shamshuipo Dispensary	10,501	2,107	—	130	—	140	—	128	5,259	724
Hung Hom Dispensary	9,466	5,132	66	170	48	43	—	137	3,758	439
Kowloon City Dispensary	6,779	5,544	118	82	26	110	—	89	2,975	32
Total 1928	109,894	82,258	367	561	246	961	421	1,322	49,910	5,894
Total 1927	88,799	72,571	315	426	281	939	397	1,335	31,031	—

INFECTIOUS DISEASES HOSPITALS.

1. There are two Infectious Diseases Hospitals in Hong Kong one maintained by the Government the other by the Tung Wah Charity. There is no Infectious Diseases Hospital in Kowloon.

THE GOVERNMENT INFECTIOUS DISEASES HOSPITAL.

1. The Government Infectious Diseases Hospital is situated at Kennedy Town at the Western extremity of Hong Kong Island. Built for a Police Station it has accommodation for 26 beds all told.

2. This Hospital is under the charge of the Medical Officer, Government Civil Hospital, and except when there are patients occupying it has only a skeleton staff. During the year it was used for Small-pox cases.

Nationality.	Number treated.			Died	Remaining at the end of 1928.
	Male	Female	Total		
Europeans	3	2	5	0	3
Chinese.....	1	5	6	0	1
Other Asiatics.....	3	1	4	0	2
Total.....	7	8	15	0	6

All cases were discreet and had been vaccinated in infancy. None had been recently done.

THE TUNG WAH INFECTIOUS DISEASES HOSPITAL.

1. The Tung Wah Infectious Diseases Hospital which was erected by the Tung Wah Charity Organisation in 1901-1902 is situated next door to the Government Infectious Diseases Hospital at Kennedy Town. It consists of three two storied blocks of wards and an administration block all connected on both floors by covered ways.

The downstairs wards are divided into four cubicles by walls only six feet high, the upstairs wards are open all through.

2. This Hospital was built for the purpose of treating Chinese cases who from fear or prejudice objected to entering the Government Hospital. Treatment offered was Chinese or Western according to the wish of the patient.

3. Up to the present practically all cases have been treated by Doctors professing skill in Chinese Medicine.

4. During 1928 only Small-pox cases were treated. The number of admissions was 126 of which 25 came from Kowloon. The number of deaths was 63 giving a percentage of deaths to treated of 50.

5. It is said that the Chinese believe wind, water, and scrutiny by strangers, to be detrimental to recovery in cases of Small-pox. Whether this be true or not, the cases are kept carefully wrapped up in their own clothes until death or recovery.

SECTION VII.

PRISONS AND ASYLUMS.

PRISONS.

1. The principal prison of the Colony is situated in Victoria, the branch prison is situated in Lai Chi Kok on the Kowloon side of the Harbour. The former has accommodation for 800 prisoners the latter for about 500. Females are only received at Victoria Gaol.

2. During 1928 the general health of the prisoners continued to be satisfactory.

3. The total number of admissions to Victoria Gaol was 5,756, the daily average number of inmates was 742, the average daily number of sick was 13.43, the sickness rate was 18.1 per mille and the death rate was 4.17 per mille.

4. The daily average number of prisoners at Lai Chi Kok was 330, the total number treated in hospital was 546 and the daily number of cases in hospital was 5.

5. The new hospital at Victoria Gaol is now open and accommodates 30 patients. During the year 16 prisoners were removed to the Government Civil Hospital for treatment not available in the prison hospital and 8 cases for X-ray examination. One prisoner was removed to the Mental Diseases Hospital. Two cases of Small-pox were removed to the Kennedy Town Infectious Diseases Hospital; the disease in both instances was contracted before admission.

6. In the female prison there were three births and one abortion.

7. There were four deaths from natural causes, three of which took place in the Gaol Hospital and one in the Government Civil Hospital.

8. The following statistical Table shows totals, averages and percentages for the years 1921 to 1928 inclusive:—

STATISTICAL TABLE SHOWING TOTALS, AVERAGES AND PERCENTAGES IN COMPARISON WITH PRECEDING SEVEN YEARS.

Year.	Total Number of				Daily Average Number of				Rate % of		
	Prisoners admitted to Victoria Prison.	Admissions to Victoria Prison Hospital.	Out-patients.	Deaths due to disease at Victoria Prison Hospital.	Prisoners in Lai Chi Kok Prison.	Prisoners in Victoria Prison.	Sick in Victoria Gaol Hospital.	Out-patients.	Admissions to Hospital to Total Admissions to Victoria Gaol.	Daily Average in Victoria Gaol Hospital to Daily Average of Prisoners in Victoria Gaol.	Deaths due to Disease, Victoria Gaol Hospital, to Total Admissions to Victoria Gaol.
1921	4,900	236	9,298	13	158	606	6.0	25.20	4.82	0.99	0.27
1922	5,014	362	14,911	8	130	657	7.6	40.00	7.22	1.16	0.16
1923	5,051	327	19,324	10	187	674	7.1	52.90	6.47	1.05	0.20
1924	7,382	402	16,381	7	228	838	10.1	44.14	5.44	1.20	0.09
1925	6,339	580	18,603	28	303	813	14.0	50.90	9.15	1.72	0.44
1926	6,654	585	6,129	10	300	754	19.3	16.78	8.79	2.56	0.15
1927	7,740	355	7,891	14	421	774	9.01	21.62	4.59	1.16	0.18
1928	5,756	337	13,787	3	529	742	13.43	37.70	5.85	1.81	0.05

THE MENTAL HOSPITAL.

1. The Mental Hospital which is an annex to the Government Civil Hospital has accommodation for 14 Europeans and 18 Asiatics.

2. This Institution is intended to be used only as a temporary abode for the mentally affected pending arrangements being made for their transfer to Europe or to Canton.

3. The Medical Officer of the Government Civil Hospital is in administrative charge.

Patients.

4. Remaining from 1927	48	
Admissions during the year	250	
		298
Discharged apparently cured	191	
Transferred to the Mental Hospital, Canton ...	49	
Died	20	
Remaining at the end of 1928	38	
		298

SECTION VIII.

METEOROLOGY.

1. Situated just within the northern limits of the tropics and occupying an insular position immediately to the south of the great mass of China, Hong Kong's climate is very materially influenced by the direction of the prevailing winds.

2. The North East Monsoon blows from November to May and during this period the weather is dry, cool and invigorating. From May until October, the Season of the South West Monsoon, the air is highly charged with moisture and the climate is hot, muggy and enervating.

3. The mean annual temperature is 72°. During the Summer months the average maximum temperature is 87° and there is little difference throughout the 24 hours. Situated on the North side of the Island the City of Victoria gets all the heat and moisture of the South West Monsoon but not the breeze itself which is cut off by the mountain behind the town. During the Winter months the range of temperature is from 70° to 45° with an average of 66°.

4. The average yearly rainfall is 85.72 inches. As might be expected most of the rain falls in the Summer months, May, June, July, August and September.

5. August and September are marked by atmospheric disturbances which now and then culminate in typhoons or cyclones accompanied by blinding sheets of rain.

METEOROLOGICAL DATA.

The following, Table I. gives the means or totals of the meteorological data for the several months of the year 1928.

Month.	Barometer at H.S.L.	Temperature.			Humidity.		Cloudiness.	Sunshine.	Rain.	Wind.	
		Max.	Mean	Min.	Rel.	Abs.				Direction.	Velocity.
	ins.	°	°	°	p.c.		p.c.	hours.	ins.	Points.	Miles p.h.
January	30.15	65.9	61.6	57.8	82	0.46	82	93.7	1.880	ENE	11.8
February	30.18	63.1	58.7	55.0	82	0.41	84	73.3	3.570	ENE	10.8
March	30.01	67.3	63.2	60.2	87	0.51	85	86.3	5.185	E by N	15.0
April	29.95	75.5	70.9	67.8	81	0.63	73	129.1	4.105	E	13.3
May	29.83	81.8	77.4	74.0	86	0.81	78	133.9	18.410	E	9.8
June	29.71	84.3	79.9	76.5	83	0.84	81	176.0	15.130	E by S	10.5
July	29.71	88.5	83.5	79.9	80	0.92	53	282.8	4.780	ESE	8.6
August	29.68	87.5	82.4	78.7	84	0.93	73	204.8	12.910	S	8.2
September	29.78	86.2	81.6	77.9	75	0.80	65	199.7	3.915	NE by E	10.8
October	30.03	80.1	75.1	71.1	65	0.57	35	263.0	0.435	ENE	11.5
November	30.10	74.0	69.3	65.7	67	0.49	57	177.2	0.815	NE by E	10.5
December	30.16	70.5	65.6	61.9	72	0.46	52	216.8	0.020	E by N	13.3
Mean or Total	29.94	77.1	72.4	68.9	79	0.65	68	169.7	71.155	E	11.2

SECTION IX.

SCIENTIFIC.

BACTERIOLOGICAL INSTITUTE.

1. The Activities of the Institute include:—

- (a) the preparation of vaccine lymph.
- (b) „ „ „ „ sera.
- (c) „ „ „ „ bacterial vaccines.
- (d) „ „ „ „ rabies vaccine.
- (e) examination of pathological material.
- (f) „ „ „ „ waters, milks, etc., etc.
- (g) medical research.

2. The Institute is under the charge of the Government Bacteriologist who is assisted by the Asst. Bacteriologist and three unqualified laboratory assistants.

3. The Bacteriologist Dr. E. P. Minett was absent on leave from 25/1/28 to 8/11/28, during which time the Institute was in charge of the Assistant Bacteriologist Dr. W. K. Dunscombe.

4. Particulars of the work done during the year are contained in the Annual Report of Bacteriologist—which is appended.

THE PUBLIC MORTUARIES.

1. There are two Public Mortuaries, one being in Victoria and the other in Kowloon.

2. At these places for the reception of the dead are received:—

- (a) bodies from Chinese Hospitals and Dispensaries for diagnosis.
- (b) “dumped” bodies—that is to say—bodies which have been taken from the place of death under cover of night and dumped in the street to save trouble and expense. The great majority of these have died natural deaths and there is no need for concealment.
- (c) bodies sent by the Police for medico-legal examination.
- (d) bodies sent by the Medical Officer of Health for examination for signs of infectious disease or for simple diagnosis.

3. In all cases where a diagnosis cannot otherwise be made a *sectio cadaveris* is performed.

4. All dead rats collected by the Sanitary Authorities are taken to the Mortuaries for examination with regard to plague. Some of these are caught by the rat catching gang but the majority are taken from the rat boxes or bins placed about the city for the reception of dead rodents.

5. Up to a few years ago the Mortuaries were in charge of the Bacteriologist—now they are under Medical Officers who have been detailed for that work in addition to some other duty.

PUBLIC MORTUARY, VICTORIA.

Report on Post Mortem Examinations, 1928.

6.	Number of post-mortem examinations performed.	3,338
	Male bodies examined	1,655
	Female bodies examined	1,683
	Claimed bodies sent from hospitals, &c.	2,821
	Unclaimed bodies mostly abandoned	517
	Number of Chinese bodies examined	3,328
	,, ,, European	4
	,, ,, Japanese	2
	,, ,, Indian	3
	,, ,, American	1
	TOTAL	3,338

Bodies were received from the following sources:—

Victoria District:—

Chinese	3,171
European	2
TOTAL	3,173

Harbour Police:—

Chinese	20
European	2
American	1
Indian	2
Japanese	2
TOTAL	27

Shaukiwan District:—

Chinese	104
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Other Villages:—

Chinese	33
Indian	1
TOTAL	34

Number of rats examined	95,312
Number found plague infected	Nil.

PUBLIC MORTUARY, KOWLOON.

Report on Post Mortem Examinations, 1928.

7. Number of post-mortem examinations performed.	2,504
Male bodies examined	1,472
Female bodies examined	1,032
Claimed bodies sent from hospitals, &c.	527
Unclaimed bodies mostly abandoned	1,977
Number of Chinese bodies examined	2,500
,, ,, European	1
,, ,, Indian	1
,, ,, Unknown	2
	<hr/>
TOTAL	2,504
	<hr/> <hr/>

Bodies were received from the following sources:—

Kowloon District	2,204
Harbour Police	300

Number of rats examined	60,260
Number found plague infected	Nil.

ANALYSTS DEPARTMENT.

1. The report of the Government Analyst is given in the Appendix.

APPENDIX A.

BACTERIOLOGICAL INSTITUTE.

Report for the year 1928

By E. P. Minett, M.D., D.P.H., D.T.M. & H.

Government Bacteriologist.

1.—STAFF.

The Bacteriologist was away on leave from 25.1.28 to 8.11.28. During his absence Dr. W. K. Dunscombe, the Assistant Bacteriologist acted in his stead.

The work of the laboratory continues to increase steadily, more especially in the preparation of Vaccine Lymph.

It is regretted that very little research work or publication of original scientific papers was possible during the year, owing to shortage of staff to cope with the routine work of the Institute.

2.—PREPARATION OF VACCINE LYMPH.

The preparation of Vaccine Lymph was carried on during the year, Buffalo calves being used for its production.

The number of calves vaccinated was 90, an increase of 23 over the previous year, the average yield per calf was from 80 to 100 c.c. glycerinated lymph.

The number of tubes issued was 111,231, an increase of 53,727 tubes over that of last year. The quantity of lymph in stock on 31st December, 1928, was 4,615 c.c. calculated to be sufficient to vaccinate 138,450 persons.

The decrease in the stock over last year is accounted for by the increased prevalence of small-pox in the Colony, and the vaccination campaign carried out by the St. John's Ambulance Association.

The value of the free issue of lymph was \$20,963.70, an increase of \$9,972.20 over that of last year. This free issue went principally to the Port Health Officer, St. John's Ambulance Association and various Chinese Dispensaries.

The Institute continues to be able to supply all demands for lymph from private medical practitioners also the Naval and Military Forces.

This branch of the Institute is rapidly increasing its output and extra assistance is already required.

3.—ANTI-MENINGOCOCCUS SERUM.

During the year 12,740 c.c. of serum was issued being an increase of 12,020 c.c. over last year's issue. About 26,420 c.c. was condemned and destroyed as being out of date for use.

The balance remaining in stock on 31st December, 1928, was 75,685 c.c.

The value of the serum issued was \$210.00.

The antitoxic reaction of the serum was satisfactory, and sterility tests were carried out as required by the Therapeutic Substances Regulations 1927.

4.—CONTAGIOUS ABORTION VACCINE.

No cases occurred amongst the Dairy Farm herd during the year and no vaccine was issued. The cultures of *B. abortus* were kept going in the laboratory, ready for immediate issue if required.

5.—MILK ANALYSIS.

The number of samples examined was 108, an increase over the number for last year.

Samples of both fresh milk and Pasteurised milk were examined weekly from the Dairy Farm.

The results from the examination of the Pasteurised milk were very satisfactory.

6.—ANTI-RABIC TREATMENT.

It is regretted that the local strain of virus was lost during the year. An effort will be made to isolate and fix another local strain of virus as soon as possible, in order that the Veterinary Department may proceed with their experiments on the protection of local dogs against rabies.

89 persons were given the Pasteur Treatment during the year, a reduction of 22 on last year's treatment.

The number of graduated individual doses issued was 1,482.

The value of the free issue was \$1,379.00.

The brains of 20 suspected dogs were examined, but in no case were negri bodies detected.

7.—CLINICAL EXAMINATIONS.

The number of specimens examined for Government Institutions and private practitioners was 7,170, a decrease of 1,345 specimens as compared with last year; the decrease is accounted for by the reduction in the number of rat smears sent to the Institute from the Public Mortuaries.

8.—EXAMINATION OF DISINFECTANTS.

Two samples of disinfectants were examined during the year by the Rideal Walker Test at the request of the Sanitary Department.

9.—ANTA-PLAGUE WORK.

Microscopic and cultural examinations of rat spleens, or other organs continued to be carried out at the request of the Medical Officers in charge of Public Mortuaries.

10.—BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

The number of water analyses carried out was 1,499. Of these 1,121 were the routine examination of tap water supplies. Samples obtained from filter beds, both raw and filtered water, numbered 284.

94 special examinations of various water supplies were carried out, and the private water supply to the Dairy Farm was examined weekly.

320 filter candles from various domestic water supplies were examined and sterilized.

The Public Water Supplies of the cities of Victoria and Kowloon were satisfactory. Tap water samples were occasionally below the standard of B. Coli absent from 50 c.c. and in such cases investigations were made.

11.—STOCK VACCINES.

The following stock vaccines were issued:—

T. A. B. Vaccine	....	32 doses	....	Value of free issue	\$16.00.
Cholera	„	6	„	No free issue.	
Plague	„	125	„	No free issue.	

Polyvalent Staphylococcus Aureus Vaccine is stocked and issued to Government Institutions when required.

12.—AUTOGENOUS VACCINES.

Autogenous Vaccines were prepared in 10 cases, of these 7 were for Government Institutions and 3 for Private Practitioners.

13.—MEDICO LEGAL WORK.

The usual Medico Legal evidence was given in Police cases at the Supreme Court and at the Magistrate's court.

The number of articles specially examined for medico legal evidence was 43, a decrease of 2 on the number for last year.

14.—MALIGNANT DISEASE.

67 specimens were examined and reported upon, an increase of 51 specimens over the number for last year.

15.—MISCELLANEOUS.

A few specimens of Mites were examined and identified at the request of the Naval Ordinance Authorities. Specimens were sent to the London School of Tropical Medicine for the classification to be verified.

Specimens of the local so called King Crabs were sent to the Museum of the above school, also a collection of the local varieties of edible sea crabs used in the Colony.

Two cases of Para-Typhoid C were detected during the year by means of an organism kindly sent from the Pathological Department of the Municipal Council of Shanghai.

Nature of Examination.		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for 1928.	Total for 1927.
Widal.	{ With B. typhosus,	36	25	35	34	49	58	87	86	85	61	71	73	700	422
	{ „ „ paratyphosus A.,...	36	25	35	34	49	58	87	86	85	61	71	73	700	422
	{ „ „ „ B.,...	36	25	35	34	49	58	87	86	85	61	71	73	700	422
	{ „ „ „ C.,...	...	...	...	...	33	58	87	86	85	61	71	37	518	...
Wassermann Reaction,		95	126	109	142	151	114	101	100	72	108	109	92	1,319	688
Blood for	{ Malaria Parasites,	13	18	18	38	52	66	118	100	74	72	86	82	737	331
	{ Filaria, .....	...	...	...	1	...	...	...	...	...	...	...	...	1	2
	{ Blood counts, etc.,	2	1	10	3	4	2	1	7	1	2	6	3	42	5
Cultivation for	{ Bacillus diphtheriæ,	23	25	24	36	82	53	6	19	20	35	69	38	430	240
	{ Meningococcus,	4	...	1	1	1	...	1	2	...	1	...	...	11	22
	{ Typhosus, Paratyphosus, Cholera, etc.,	4	6	1	4	12	7	16	16	6	8	3	4	87	40
Fæces for	{ Helminth ova,	7	13	11	21	42	33	19	22	24	21	27	15	255	141
	{ Amœbæ of Dysentery,	2	7	3	10	33	31	29	22	11	13	14	4	179	65
Tissues for Section, .....		...	8	9	7	5	7	8	6	3	7	3	4	67	16
Sputa,		11	18	22	22	23	43	28	26	16	23	22	22	276	218
Pus,		4	1	2	3	2	2	2	1	2	...	...	3	22	51
Urine,		4	3	6	4	10	8	13	8	8	14	4	4	86	50
Smear for Gonococcus,		3	1	3	6	11	9	9	14	25	15	16	12	124	...
Smear for B. lepræ, .....		...	2	2	1	5	6	1	...	1	2	1	2	23	...
Rat smears and spleens for B. pestis,		300	290	29	2	4	...	...	...	...	...	...	...	625	3,660
Blood, &c., for B. pestis, .....		...	...	...	...	6	1	2	...	...	...	...	...	9	...
Animals for Rabies,		1	1	3	4	1	3	4	1	...	...	...	2	20	36
Materials for medico-legal purposes,		17	3	...	1	4	1	1	4	...	6	...	6	43	45
Weil Felix Reaction for Typhus fever, .....		...	...	...	...	...	...	1	...	1	2	...	...	4	3
Agglutination Reaction for B. dysentericæ .....		...	...	...	...	...	...	4	10	1	9	3	2	29	...
Bacteriological Analyses of Water,		102	118	116	107	153	119	121	126	138	134	136	129	1,499	1,679
Bacteriological Examination of Milk,		8	8	8	10	11	8	10	9	8	11	8	9	108	105
Autogenous vaccines prepared,...		...	..	...	1	2	2	1	2	2	...	...	...	10	28
Rideal Walker's Estimation of disinfectants		1	...	...	...	...	...	...	...	1	...	...	...	2	7
Freshly prepared vaccines tested for sterility,		4	6	2	6	6	6	4	6	6	4	2	...	52	139
Filter Candles sterilized for domestic filters,		26	20	21	20	25	21	24	36	28	36	32	31	320	381
Miscellaneous,		8	7	30	18	12	10	5	7	7	16	9	17	146	86
Total,		747	757	535	570	837	784	877	888	795	783	834	737	9,144	9,304

APPENDIX B.

ANALYST'S DEPARTMENT.

Report by Mr. E. R. Dovey, A.R.C.Sc., F.I.C., F.C.S.

Government Analyst.

The number of analyses performed during the year was 3,060 as against 2,733 in 1927.

The following classification shows the nature of the work done:—

Chemico-Legal Examinations.

	1928	1927
Toxicological examinations (including 46 stomachs)	59	98
Leaves from Stomach	0	1
Blood	11	5
Clothing for stains	0	9
Liquids	10	6
Powders	5	1
Vomits	9	7
Food	4	3
Medicines	7	3
Food Residues	0	14
Crystals	1	1
Bombs and Explosives	2	3
Bullets	1	2
Herbs	0	3
Pills	4	1
Opium	1	1
Counterfeiting material	14	0
Other substances	10	3
Bio-chemical examinations	3	51

Dangerous Goods Ordinance.

	1928	1927
Fuel Oil	15	16
Firecrackers	3	5
Liquids for flash point	0	1
Gasolene	7	1
Ships for inflammable vapour	71	60
Kerosene	6	7
Coal gas	0	1
Potassium chlorate	2	1
Alcohol	0	1
Turpentine	4	0

Foods and Drugs.

	1928	1927
Arrowroot	1	0
Beer	1	0
Biscuits	0	1
Brandy	3	0
Bread	82	75
Butter, Fresh	27	26
Butter, Tinned	5	12
Cake	1	0
Cheese	10	19
Chinese wine	1	0
Chocolate	0	1
Cocoa	5	0
Coffee	36	71
Confectionery	2	22
Draught Ale	2	0
Flour	61	49
Jam	7	0
Lard	8	17
Lemonade	3	0
Lemon squash	3	0
Macaroni	1	0
Margarine	0	1
Milk, Fresh	70	144
„ Condensed	9	3
„ Skimmed	0	6
„ Tinned	29	32
Molasses	2	0
Mustard	1	0
Olive Oil	0	7
Peas	0	1
Pepper	31	0
Preserved plums	1	0
Rice	0	31
Strawberry essence	0	1
Sugar	58	59
Tea	35	54
Tea dust	0	1
Vinegar	6	6

Waters.

	1928	1927
Public Supplies	1774	1248
Distilled water	1	3
Wells and springs	3	3
River water	0	1
Water from swimming pool	0	1
Nullah water	0	1
Sea water	3	0
Rain water	2	0

Building Materials.

	1928	1927
Lime	15	22
Cement	2	3
Clay	3	4
Plaster	1	0
Quicklime	2	0
Sand	0	4
Water pipe	0	1

Oils.

	1928	1927
Anise Oil	21	12
Cassia Oil	72	9
Wood Oil	53	121
Tea seed oil	7	5
Tallow	0	1
Sandalwood oil	0	2
Rape seed oil	0	1
Lard oil	4	12
Peppermint oil	1	0

Pharmacy Ordinance.

	1928	1927
Procaine	1	0
Chinese Drugs	4	1
Patent medicines	1	1
Japanese medicines	1	0
Morphine solutions	1	0
Ampoules	0	6
Mixtures	0	1
Pills	0	1
Powders	0	1
Other drugs	1	1

Chemicals.

	1928	1927
Bleaching powder	1	1
Potassium nitrate	3	0
Ammonium sulphate	3	0
Alum	1	0
Aluminium sulphate	1	1
Nitric acid	3	0
Sulphuric acid	17	39
Sodium hydroxide	1	1
Carbolic acid solution	0	1
Zinc iodide solution	0	1

Mineralogical.

	1928	1927
Metals	79	66
Ores	68	73
Coal	86	79
Limestone	6	2
Minerals	3	2
Magnetite	0	1
Carbonaceous shale	0	1

Miscellaneous.

	1928	1927
Coal Tar Disinfectants	4	11
Soy	1	3
Book Paint	0	1
Deposit from iron pipe	1	0
Knitted fabrics	5	0
Meat juice	0	1
Paper	0	2
Padi	0	2
Yarn cones	2	0
Composition	1	0
Deposit from batteries	1	0
Urine	13	0
Earwig exterminator	0	1
Rice bags	0	2
Fertilizer	0	3
Refractometers for calibration	1	2
Paraffin wax	0	5
Musk	0	1
Apples for presence of arsenic	0	1
Chinese sauce	0	1
Alumina-ferric	0	1
Nga-tin powder	0	1
Meal	0	1
Steel rail	0	1
Hay, for presence of poisonous plants	0	1
Alumina	0	1
Green leaves	0	1
Soil	4	1
Slime from filter beds	0	2
Transformer oil	1	1
Purico	0	1
Lumber	0	3
Silica threads	0	1
Wrappings	2	0
Sewage effluents	6	0
Cigars	1	0
Deposit from pump	1	0

	1928	1927
Oil testing outfit	1	0
Deposit	1	0
Fish	1	0
Fire extinguisher	1	0
Compound engine oil	1	0
Etching fluid	1	0
Mineral tar	3	0
Dusting powder	1	0
Peanuts	2	0
Liquid	2	0
Hair tonic	1	0
Leather	1	0
Dressing	1	0
Solder	2	0
Yeast-vite	1	0
Poison	1	0
<i>Total</i>	<u>3060</u>	<u>2733</u>

Toxicological.

Among the investigations carried out during the year were 59 cases of suspected human poisoning. The following Table shows the results:—

<i>Poison.</i>	<i>No. of Cases.</i>
No poison found	21 Cases.
Opium found	25 „
Lysol found	4 „
Animal toxins (ptomains) found	4 „
Morphine found	2 „
Hydrochloric Acid found	1 „
Alcohol and acetaldehyde found	1 „
Potassium cyanide found	1 „
<i>Total</i>	<u>59 Cases.</u>

A stomach was received from Kowloon Mortuary in February, from the body of a man found hanging on a tree, for examination to exclude poison, taken previously. Hydrochloric acid was found in quantity in the stomach showing that a previous and unsuccessful attempt at suicide had been made.

A surgical dressing from an abdominal wound was received for the determination of the presence or absence of urine. The presence of an appreciable amount of urea enabled a definite answer to be given.

A body was received at the Kwong Wah Hospital from a Sampan. The stomach and a specimen of blood from the thorax were submitted to the Laboratory. No poison was found in the stomach but an examination of the "blood" showed that it was not normal pleural fluid but a mixture of blood and sea water.

One sample of blood submitted was supposed, from its bright red colour to indicate poisoning by carbon monoxide. Spectroscopic examination showed the colour to be due to nitroxyhaemoglobin, not carboxaemoglobin. Nitroxyhaemoglobin is a substance which is occasionally found in normal decomposing bodies and has been known in the past to mislead toxicological investigators, who have reported it as the carboxy-compound.

As in previous years, by far the most common poison found has been opium. The method for the rapid determination of opium in stomach contents worked out in this Laboratory and published in the "Analyst", January 1927, was used in many of these cases and gave very good results.

A sample of ginger tea was submitted, the addition of poison having been suspected. Investigation showed that soap had been added, probably with intent to annoy. No poison or other deleterious substance was present.

A bottle containing liquid was sent in by the Police. Some of the liquid had been swallowed by a Chinese girl in an attempt at suicide. The liquid proved to be caustic soda solution of 22.4% strength.

Mineralogical.

The following Table shows the nature of the 147 samples of metals and ores examined:—

Metals	1928	1927	Ores.	1928	1927
Tin	77	64	Wolfram.....	27	30
Antimony	2	2	Manganese	20	28
			Bismuth.....	17	12
			Antimony	1	2
			Gold	0	1
			Lead	1	0
			Tin Dust	2	0
<i>Totals.....</i>	79	66	<i>Totals.....</i>	68	73

Food and Drugs.

During the year 457 samples of food were examined under the Food and Drugs Ordinance, as compared with 579 samples in 1927. Of these 21 or 4.6% were found to be adulterated. The following Table shows the nature of the samples examined:—

Substance.	No. of samples analysed.	No. found genuine.	No. found adulterated.
Coffee	34	34	0
Butter, Fresh	27	27	0
„ Tinned	5	5	0
Tea	34	31	3
Milk, Tinned	33	33	0
„ Fresh	70	66	4
„ Skimmed	1	1	0
„ Sterilised	1	1	0
Flour	47	47	0
Pepper	25	12	13
Sugar	56	56	0
Bread	83	83	0
Mustard	1	0	1
Confectionery	2	2	0
Lard	9	9	0
Cocoa	5	5	0
Arrowroot	1	1	0
Jam	7	7	0
Cheese	10	10	0
Vinegar	6	6	0
<i>Totals</i>	457	436	21

The confectionery samples mentioned above were particularly examined for the presence of injurious colouring matters but in no case were such found.

Water Supplies.

In my report for 1927, I commented on the great increase which had taken place during the past few years in the number of samples of water examined in the Laboratory. The year just ended has seen a still further large increase, the number of samples examined being 1,793 as against 1,253 in 1927. If the work continues to grow at the present rate it will be necessary next year to have an additional assistant to devote practically the whole of his time to this branch of work.

The routine examinations of the water filtered through the new Pattison mechanical filters at Bowen Road showed the product to be highly satisfactory, the highest value for "oxygen absorbed" being 0.023, for free ammonia, 0.0028 and for albumenoid ammonia, 0.0061, all expressed in parts per 100,000. As regards the physical properties of this supply, the colour of the filtered water was never higher than 2.5 Lovibond colour units, and the transparency was throughout, 100 cms.

With regard to the water from the other filtration plants it may be said that over 95% of the samples examined were completely satisfactory. The highest value for albumenoid ammonia obtained was that given by the Shaukiwan supply in May, namely 0.011 parts per 100,000, this supply during the same month also giving the highest value for free ammonia, namely 0.0082 parts per 100,000. The highest values for "oxygen absorbed" were yielded by the Aberdeen supply, and the West Point supply, in May, namely 0.055 per 100,000. The Aberdeen supply in May gave colour and transparency figures of 154.8 Lovibond units and 15 cms. respectively, but these figures were quite exceptional. The great majority of the samples examined gave values for colour less than 15 Lovibond units and transparency figures above 80 cms.

The hydrogen ion concentration was determined on all samples from the main supplies, both on the raw and on the filtered waters, and much useful data was thus obtained as to the reaction of the local raw water. These values might be of considerable importance in any projected malaria campaign.

The staff supervising the Pattison plant at Bowen Road are now equipped to carry out routine determinations of the hydrogen ion concentration of the water for control purposes on the spot.

The electrical conductivity method has been used throughout the year on all water from the public supplies, both filtered and unfiltered.

Criminal Work.

A bomb found by the Police was submitted for examination. It was found to consist of a tin canister containing three sticks of dynamite packed round with earth and stones. The sticks of dynamite were fitted with fuses and detonators.

One "knock-out" pistol and two cartridges were submitted for examination. Such pistols are designed to stupify the person fired at, without producing serious bodily harm. The cartridges were found to contain a small charge of black powder together with a gelatin capsule of allyl isothiocyanate. Unless the person fired at was within ten feet the effect of the pistol would be almost negligible.

Three samples of explosive supposed to be intended for killing fish, were submitted. The explosive was found to be compressed guncotton, tied round with fishing line.

An unregistered medical practitioner's surgery was raided in November last and a quantity of drugs seized. Many of these proved to be modern Western medicines and not purely Chinese drugs. The owner was convicted and fined.

In the same month, a large quantity of printing materials was sent in by the Police, in connection with the production of forged bank-notes, and an examination of these showed that they were suitable for the production of such notes.

A considerable amount of work of a photographic and microscopic nature was carried out in connection with the Treasury Fraud Case.

Research.

A considerable amount of work was carried out during the year on the detection and determination of alcohol in cassia oil.

Since allegations were made in London in 1927 that many samples of such oil from Hong Kong were adulterated with alcohol the local trade in this important commodity had practically ceased.

The existence of traces of alcohol occurring naturally in the oil was investigated, also the possibility of its introduction through the addition of synthetic cinnamic aldehyde. Methods were worked out for the rapid detection of alcohol and also for its exact determination. The matter was also taken up with the Chief Government Chemist, Government Laboratory, London.

Specifications were worked out and submitted to the Local Chamber of Commerce for "*Pure China Cassia Oil*", "*Standard China Cassia Oil*", "*Standard 80-85 Cassia Oil*", etc. If these specifications come to be adopted, and standard methods of analysis also approved, then the cassia oil trade should be placed in a much more satisfactory position.

Work has also been done on the Bolton and William's Heat Test for Wood Oil. Many of the samples of South China oil give values much higher than those from other producing centres. Investigations were made to ascertain the cause of this.

Sampling.

The following sampling of commercial commodities was carried out by the official sampler during the year:—

Tin	39,300	Ingots.
Cassia Oil	619	Containers.
Anise Oil	216	Containers.
Wood Oil	414	Tons.
Manganese Ore	470	Tons.
Wolfram Ore	42	Tons.
Nitric Acid	400	Cases.
Bismuth Ore	100	Bags.
Solder	39	Cases.
Lead Ore	2,150	Bags.

Revenue.

The fees paid to the Treasury during the year amounted to \$15,562 as against \$16,146 in 1927. The value of the work done as determined from the Tariff of Fees (Government Notification No. 439 of 1918) was \$46,011, as against \$46,428 in 1927.

Staff.

Dr. O. F. Lubatti left the Colony on long leave in April and was subsequently invalided out of the service. His post is at present vacant.

Ann Sellings

DIRECTOR

MEDICAL & SANITARY SERVICES

APPENDIX C.

MENTAL HOSPITAL.

Nationality and Sex of Patients treated in 1928.

Nationality.	Remaining at end of 1927.		Admitted.		'Total Number Treated.		Discharged.		Died.		Remaining in at end of 1928.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Europeans	6	3	13	4	19	7	14	4	—	—	5	3
Americans	—	—	—	1	—	1	—	1	—	—	—	—
Indians	—	—	6	—	6	—	6	—	—	—	—	—
Japanese	—	—	2	3	2	3	1	2	1	—	—	1
Chinese	19	19	132	88	151	107	118	94	11	8	22	5
West Indians	—	—	1	—	1	—	—	—	—	—	1	—
Negro	—	1	—	—	—	1	—	—	—	—	—	1
Total.....	25	23	154	96	179	119	139	101	12	8	28	10
			= 250		= 298							

Diseases.	Remaining in hospital at end of 1927.	Admitted during 1928.	Total cases treated.	Discharged.				Remaining in Hospital at end of 1928.
				Apparently cured.	Relieved.	Transferred to Canton Mental Hospital.	Died.	
Errors of Development:—								
Imbecility congenital	3	8	11	—	4	6	1 (1)	—
„ Moral	1	—	1	—	—	1	—	—
Feeble mindedness	4	11	15	—	6	6	—	3
Disorders of Function:—								
Mania Acute	3	20	23	5	8	6	2 (2)	2
„ Intermittent	1	3	4	—	2	—	1 (3)	1
„ Chronic	2	7	9	—	6	2	1 (4)	—
„ Associated with Lactation	2	2	4	—	2	2	—	—
Melancholia Acute	—	6	6	1	4	1	—	—
„ Agitated	1	2	3	—	1	1	—	1
„ Chronic	2	—	2	—	—	—	—	2
Maniacal Depressive Insan- ity	1	—	1	—	—	—	—	1
Circular Insanity	—	2	2	—	1	—	—	1
Alternating Insanity	—	1	1	—	—	—	—	1
Stupor Anergic	2	—	2	—	—	1	—	—
Delusional Insanity Acute .	1	8	9	4	5	—	—	—
„ „ Chronic	2	7	9	—	2	3	—	4
Obsessional Insanity	1	2	3	—	2	—	1 (5)	—
Insanity of Infective, Toxic & other general conditions:—								
Acute Delirious Mania	2	1	3	—	3	—	—	—
Febrile Insanity	—	4	4	—	—	—	4 (6)	—
Post Febrile Insanity	—	3	3	—	1	1	1 (7)	—
Confusional Insanity	1	—	1	—	1	—	—	—
Syphilitic Insanity	—	2	2	—	2	—	—	—
General Paralysis of the Insane	—	3	3	—	3	—	—	—
Tabes—Dorsalis	—	1	1	—	1	—	—	—
Dementia from Local Cere- bral Syphilis	—	2	2	—	—	—	1 (8)	1
Insanity due to Alcohol	—	7	7	7	—	—	—	—
Delirium Tremens	—	5	5	4	1	—	—	—
Dementia Praecox	3	20	23	—	13	7	—	3
„ Primary	4	27	31	—	13	5	4 (9)	9
„ Secondary	4	11	15	—	6	1	1 (10)	7
„ Senile	3	7	10	—	5	4	1 (10)	—
„ from Epilepsy	3	2	5	—	2	2	—	1
Observation	2	76	78	62	14	—	2 (11)	—
Total:—1928	48	250	298	83	108	49	20	38
Total:—1927	28	267	295	111	100	18	18	48

CAUSES OF DEATH.

- | | | |
|-----------------------|---------------------------------|------------------------|
| 1. Broncho-pneumonia. | 6. Sub-acute Nephritis. | 9. Beri-beri (3). |
| 2. Lobar-pneumonia. | 6. Lobar-pneumonia (3). | 10. Asthma (2). |
| 3. Beri-beri. | 7. Inanition & Cardiac Failure. | 11. Broncho-pneumonia. |
| 4. General Debility. | 8. Cerebral Syphilis. | 11. Typhoid Fever. |
| 5. Cardiac Failure. | 9. Septic Broncho-pneumonia. | |

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
I.—Epidemic, Endemic, and Infectious Diseases.										
Enteric Group :—										
(a) Typhoid Fever	4	63	5	67	5	1	144	22	145	1
(b) Paratyphoid A.	1	5	...	6	...	...	...	...	...	...
(c) Paratyphoid B. ....	...	8	...	8	...	...	...	...	...	...
Relapsing Fever.....	...	2	...	2	...	...	...	...	...	...
Malaria :—										
(a) Tertian.....	3	253	...	256	5	18	940	195	958	36
(b) Aestivo-autumnal	5	202	10	207	6	7	233	64	240	1
(c) Cachexia	1	30	3	31	2	...	...	...	...	...
Smallpox.....	...	17	...	17	...	...	126	63	126	25
Measles .....	...	12	...	12	...	1	8	...	9	...
Whooping Cough .....	...	12	...	12	...	...	3	...	3	...
Diphtheria	1	37	15	38	2	5	34	13	39	1
Influenza.....	3	131	...	134	3	12	440	75	452	21
Mumps .....	...	12	...	12	...	...	9	...	9	...
Dysentery :—										
(a) Amœbic	1	21	...	22	...	5	160	46	165	5
(b) Bacillary	1	48	2	49	1	9	30	...	39	5
(c) Undefined or due to other causes .....	...	40	...	40	...	10	129	99	139	15
Plague :—										
(a) Bubonic .....	...	...	...	...	...	...	3	1	3	...
Leprosy .....	...	10	...	10	...	...	7	...	7	...
Erysipelas .....	...	6	...	6	...	...	3	...	3	1
Encephalitis Lethargica .....	...	4	1	4	...	...	3	1	3	...
Epidemic Cerebro-spinal Fever .....	...	5	2	5	...	...	14	10	14	2
Other Epidemic Diseases :—										
(a) Varicella (Chicken-pox).....	1	6	...	7	...	...	...	...	...	...
(b) Dengue.....	2	25	...	27	...	...	2	...	2	1
Rabies .....	...	...	...	...	...	...	1	...	1	...
Tetanus	1	7	5	8	...	...	32	25	32	...
Mycosis .....	...	5	...	5	1	...	...	...	...	...
Carried forward.....	24	961	43	985	25	68	2,321	614	2,389	114

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward</i>	24	961	43	985	25	68	2,321	614	2,389	114
<i>I.—Epidemic, Endemic, and Infectious Diseases,—Continued.</i>										
Tuberculosis Pulmonary and Laryngeal	6	81	19	87	7	80	1,274	705	1,354	55
Tuberculosis of the Meninges or Central Nervous System .....	...	22	21	22	...	...	25	25	25	...
Tuberculosis of the Intestines or Peritoneum .....	...	9	7	9	1	...	22	8	22	2
Tuberculosis of the Vertebral Column .....	...	4	...	4	1	...	10	2	10	2
Tuberculosis of Bones and Joints.....	6	46	...	52	8	...	50	1	50	5
Tuberculosis of other organs :—										
(a) Skin or Subcutaneous Tissue (Lupus) .....	...	1	...	1	...	...	6	...	6	...
(b) Bones .....	...	...	...	...	...	...	3	...	3	...
(c) Lymphatic System	2	27	...	29	2	3	73	6	76	1
Tuberculosis disseminated :—										
(a) Acute .....	...	3	3	3	...	5	65	53	70	1
(b) Chronic.....	1	2	1	3	...	...	1	...	1	...
Syphilis :—										
(a) Primary .....	...	4	...	4	...	...	44	...	44	...
(b) Secondary.....	5	169	...	174	18	23	47	...	70	15
(c) Tertiary .....	...	5	...	5	1	...	202	...	202	10
(d) Hereditary .....	...	13	...	13	1	...	...	...	...	...
(e) Period not indicated .....	...	1	...	1	...	...	143	...	143	...
Soft Chancre	3	37	...	40	...	...	32	...	32	...
Gonorrhœa and its complications .....	...	180	...	180	9	1	43	...	44	...
Gonorrhœal Ophthalmia .....	...	1	...	1	...	...	4	...	4	...
Gonorrhœal Arthritis	8	55	...	63	...	...	34	...	34	...
Granuloma Venereum .....	...	5	...	5	...	...	7	...	7	...
Septicæmia .....	...	1	...	1	...	3	63	29	66	2
<i>II.—General Diseases not mentioned above.</i>										
Cancer or other malignant Tumours of the Buccal Cavity.....	...	22	3	22	2	...	15	...	15	...
Cancer or other malignant Tumours of the Stomach or Liver	5	30	8	35	...	...	17	...	17	...
<i>Carried forward.....</i>	60	1,679	105	1,739	75	183	4,501	1,443	4,684	207

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	60	1,679	105	1,739	75	183	4,501	1,443	4,684	207
<i>II.—General Diseases not mentioned above,—Continued.</i>										
Cancer or other malignant Tumours of the Peritoneum, Intestines, Rectum .....	...	9	5	9	...	...	8	...	8	...
Cancer or other malignant Tumours of the Female Genital Organs ...	...	29	5	29	...	...	8	...	8	...
Cancer or other malignant Tumours of the Breast	1	26	2	27	1	...	10	...	10	...
Cancer or other malignant Tumours of the Skin .....	...	4	...	4	...	...	2	...	2	...
Cancer or other malignant Tumours of Organs not specified .....	...	3	2	3	...	...	33	...	33	...
Tumours non-Malignant	3	43	...	46	1	...	35	...	35	...
Acute Rheumatism.....	1	14	...	15	...	6	70	...	76	3
Chronic Rheumatism	2	42	...	44	1	...	42	...	42	5
Scurvy (including Barlow's Disease)...	...	2	...	2	...	...	...	...	...	...
Beri-Beri	1	28	1	29	1	44	922	350	966	55
Rickets .....	...	4	...	4	...	...	...	...	...	...
Diabetes (not including Insipidus) ...	...	4	...	4	...	...	...	...	...	...
Anæmia :—										
(a) Pernicious	1	3	...	4	...	...	37	21	37	...
(b) Other Anæmias and Chlorosis	2	16	...	18	...	...	98	...	98	...
Diseases of the Thyroid Gland :—										
(a) Exophthalmic Goitre .....	...	7	...	7	1	...	1	...	1	...
(b) Other diseases of the Thyroid Gland, Myxœdema.....	...	3	...	3	...	...	2	...	2	...
Diseases of the Supra-Renal Glands...	...	1	...	1	...	...	...	...	...	...
Diseases of the Spleen .....	...	1	...	1	...	...	18	...	18	...
Leukæmia :—										
(a) Leukæmia .....	...	1	...	1	...	...	...	...	...	...
(b) Hodgkin's Disease... ..	...	3	...	3	...	...	...	...	...	...
Alcoholism	1	23	3	24	2	...	...	...	...	...
Chronic poisoning by organic substances (Morphia, Cocaine, &c.)...	...	6	...	6	...	20	94	24	114	...
Other General Diseases :—										
Auto-intoxication .....	...	...	...	...	...	...	5	...	5	...
Purpura Hæmorrhagica.....	...	3	...	3	...	...	...	...	...	...
<i>Carried forward.....</i>	72	1,954	123	2,026	82	253	5,886	1,838	6,139	270

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	72	1,954	123	2,026	82	253	5,886	1,838	6,139	270
<i>III.—Affections of the Nervous System and Organs of the Senses.</i>										
Encephalitis (not including Encephalitis Lethargica) .....	...	2	1	2	...	7	22	...	29	6
Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	1	1	1	2	...	...	15	13	15	...
Locomotor Ataxia .....	...	5	...	5	...	...	5	...	5	...
Other affections of the Spinal Cord ...	1	5	..	6	2	...	22	8	22	...
Apoplexy :—										
(a) Hæmorrhage	2	10	6	12	...	...	94	72	94	...
(b) Embolism.....	...	...	...	...	...	...	10	7	10	...
(c) Thrombosis .....	...	14	4	14	...	...	16	6	16	...
Paralysis :—										
(a) Hemiplegia .....	...	4	...	4	1	...	60	17	60	...
(b) Other Paralysis .....	...	...	...	...	...	...	44	1	44	...
General Paralysis of the Insane .....	...	...	...	...	...	...	1	1	1	...
Other forms of Mental Alienation.....	...	6	...	6	...	...	21	...	21	...
Epilepsy .....	...	12	...	12	...	...	27	...	27	...
Eclampsia, Convulsions (nonpuerperal) 5 years or over .....	...	2	1	2	...	...	1	...	1	...
Infantile Convulsions.....	...	10	5	10	...	...	3	...	3	...
Chorea .....	...	1	...	1	...	...	1	...	1	...
Hysteria	1	9	...	10	3	...	8	...	8	...
Neuritis .....	...	32	...	32	2	48	558	1	606	20
Neurasthenia	2	10	...	12	...	...	15	...	15	...
Other affections of the Nervous System such as Paralysis Agitans..	1	11	...	12	...	...	12	...	12	...
Affections of the Organs of Vision :—										
(a) Diseases of the Eye .....	...	2	...	2	...	17	279	...	296	20
(b) Conjunctivitis .....	...	35	...	35	...	...	50	...	50	...
(c) Trachoma.....	1	12	...	13	1	3	43	...	46	2
(d) Tumours of the Eye .....	...	2	...	2	...	...	3	...	3	...
(e) Other affections of the Eye...	...	30	...	30	1	...	...	...	...	...
Affections of the Ear or Mastoid Sinus..	...	20	...	20	2	2	46	...	48	2
<i>Carried forward.....</i>	81	2,189	141	2,270	94	330	7,242	1,964	7,572	320

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	81	2,189	141	2,270	94	330	7,242	1,964	7,572	320
<i>IV.—Affections of the Circulatory System.</i>										
Pericarditis .....	...	4	...	4	...	...	3	3	3	...
Acute Endocarditis or Myocarditis ...	1	1	...	2	...	4	147	104	151	1
Angina Pectoris.....	...	1	...	1	...	...	...	...	...	...
Other Diseases of the Heart :—										
(a) Valvular :—										
Mitral	1	44	11	45	3	...	117	34	117	5
Aortic	1	29	11	30	1	...	8	2	8	...
(b) Myocarditis	3	32	5	35	2	...	42	15	42	...
Diseases of the Arteries .—										
(a) Aneurism .....	...	11	2	11	...	...	2	2	2	...
(b) Arterio-Sclerosis .....	...	7	...	7	...	...	23	5	23	2
(c) Other diseases	1	4	...	5	...	...	...	...	...	...
Embolism or Thrombosis (non-cerebral)	...	2	1	2	...	...	...	...	...	...
Diseases of the Veins :—										
Hæmorrhoids .....	...	33	...	33	1	...	47	...	47	...
Varicose Veins	1	26	...	27	2	...	4	...	4	...
Phlebitis .....	...	5	...	5	...	...	...	...	...	...
Diseases of the Lymphatic System:—										
Lymphangitis.....	...	5	...	5	...	...	7	...	7	...
Lymphadenitis, Bubo (non-specific)	1	18	...	19	...	...	47	...	47	...
Hæmorrhage of undetermined cause...	...	...	...	...	...	...	4	...	4	...
Other affections of the Circulatory System .....	...	1	...	1	...	...	3	...	3	...
<i>V.—Affections of the Respiratory System.</i>										
Diseases of the Nasal Passages :—										
Adenoids .....	...	3	...	3	...	...	1	...	1	...
Polypus .....	...	8	...	8	8	...	1	...	1	...
Rhinitis .....	...	10	...	10	...	...	...	...	...	...
Rhinitis .....	...	13	...	13	...	...	7	...	7	...
Affections of the Larynx :—										
Laryngitis .....	...	7	...	8	...	...	6	...	6	...
<i>Carried forward.....</i>	91	2,453	171	2,544	111	334	7,711	2,129	8,045	328

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	91	2,453	171	2,544	111	334	7,711	2,129	8,045	328
<i>V.—Affections of the Respiratory System, — Continued.</i>										
Bronchitis :—										
(<i>a</i>) Acute	1	25	...	26	...	9	443	...	452	14
(<i>b</i>) Chronic.....	5	45	2	50	3	67	315	128	382	70
Broncho-Pneumonia	2	171	47	173	4	4	634	271	638	5
Pneumonia :—										
(<i>a</i>) Lobar	4	68	10	72	4	...	124	92	124	...
(<i>b</i>) Unclassified .....	...	...	...	...	...	...	123	11	123	...
Pleurisy, Empyema	3	48	1	51	3	...	38	8	38	...
Congestion of the Lungs	1	...	...	1	...	...	1	...	1	...
Asthma	4	43	..	47	1	...	78	2	78	...
Pulmonary Emphysema.....	...	...	...	...	...	...	4	...	4	...
<i>VI.—Diseases of the Digestive System.</i>										
Diseases of Teeth or Gums-Caries,										
Pyorrhœa, &c.	1	78	...	79	3	3	27	...	30	...
Other affections of the Mouth:—										
Stomatitis .....	...	14	...	14	...	2	4	...	6	...
Glossitis, &c. ....	...	4	...	4	...	...	4	...	4	...
Affections of the Pharynx or Tonsils:—										
Tonsillitis .....	...	92	...	92	...	2	16	...	18	...
Pharyngitis .....	...	37	..	37	1	2	18	...	20	...
Affections of the Œsophagus .....	...	4	...	4	...	...	14	4	14	...
Ulcer of the Stomach	1	15	...	16	...	2	39	5	41	...
Ulcer of the Duodenum.....	...	23	...	23	1	...	2	...	2	...
Other affections of the Stomach :—										
Gastritis	1	40	...	41	...	5	173	1	178	3
Dyspepsia, &c. ....	...	53	...	53	...	10	146	...	156	15
Diarrhœa and Enteritis :—										
Under two years.....	...	42	11	42	2	13	368	205	381	14
Two years and over ... ..	...	102	2	102	...	10	619	263	629	5
Colitis	1	29	...	30	...	...	36	1	36	...
Ulceration .....	...	14	...	14	...	...	1	...	1	...
Sprue .....	...	3	1	3	...	...	...	...	...	...
Ankylostomiasis.....	...	36	...	36	2	...	36	1	36	...
<i>Carried forward.....</i>	115	3,439	245	3,554	135	463	10,974	3,121	11,437	454

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.				CHINESE HOSPITALS.					
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	115	3,439	245	3,554	135	463	10,974	3,121	11,437	454
<i>VI.—Diseases of the Digestive System,—Continued.</i>										
Diseases due to Intestinal Parasites:—										
(a) Cestoda (Tænia) .....	...	3	...	3	...	...	1	...	1	...
(b) Trematoda (Flukes)	1	11	...	12	...	...	2	...	2	...
(c) Nematoda (other than Ankylostoma):—										
Ascaris .....	...	33	...	33	...	6	58	1	64	...
Oxyuris .....	...	5	...	5	...	...	1	...	1	...
(d) Unclassified .....	...	...	...	...	...	...	7	...	7	...
Appendicitis	4	82	6	86	3	2	23	14	25	3
Hernia.....	1	52	9	53	1	...	40	1	40	...
Intestinal Obstruction .....	...	2	1	2	...	...	...	...	...	...
Affections of the Anus, Fistula, &c. ....	...	9	...	9	...	5	74	10	79	2
Other affections of the Intest- ines	4	38	...	42	2	...	...	...	...	...
Enteroptosis ....	...	2	...	2	...	...	2	...	2	...
Constipation .....	...	13	...	13	...	3	44	2	47	...
Cirrhosis of the Liver:—										
(a) Alcoholic	3	28	9	31	1	...	11	7	11	1
(b) Other forms .....	...	4	...	4	...	...	21	15	21	...
Biliary Calculus .....	...	9	...	9	1	...	1	...	1	...
Other affections of the Liver:—										
Abscess .....	...	5	...	5	...	...	3	3	3	...
Hepatitis.....	...	24	1	24	...	...	8	...	8	...
Cholecystitis .....	...	14	...	14	...	...	4	4	4	...
Jaundice .....	...	16	...	16	...	...	9	...	9	...
Diseases of the Pancreas .....	...	...	...	...	...	...	1	1	1	...
Peritonitis (of unknown cause).....	...	29	24	29	...	...	21	21	21	...
Other affections of the Digestive System .....	...	2	...	2	...	...	13	...	13	...
<i>VII.—Diseases of the Genito-urinary System (non-Venereal).</i>										
Acute Nephritis .....	...	27	...	27	1	3	93	2	96	5
Chronic Nephritis	6	69	19	75	6	26	635	276	661	23
Chyluria .....	...	3	...	3	...	...	1	...	1	...
Other affections of the Kidneys, Pyelitis, &c. ....	...	7	...	7	...	...	3	3	3	...
Urinary Calculus	1	33	...	34	2	5	33	2	38	5
<i>Carried forward.....</i>	135	3,959	314	4,094	152	513	12,083	3,483	12,596	493

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	135	3,959	314	4,094	152	513	12,083	3,283	12,596	493
<i>VII.—Diseases of the Genito-urinary System (non-Venereal),—Continued.</i>										
Diseases of the Bladder :—										
Cystitis .....	...	12	...	12	...	2	18	4	20	1
Diseases of the Urethra :—										
(a) Stricture .....	...	30	1	30	3	2	32	1	34	...
(b) Other .....	...	1	1	1	...	...	10	...	10	...
Diseases of the Prostate :—										
Hypertrophy .....	...	5	...	5	...	2	6	...	8	...
Prostatitis .....	...	...	...	...	...	...	1	...	1	...
Diseases (non-Venereal) of the Genital Organs of Man :—										
Epididymitis .....	...	20	...	20	2	7	20	...	27	1
Orchitis	1	41	...	42	...	3	14	...	17	...
Hydrocele .....	...	20	...	20	...	...	11	...	11	...
Ulcer of Penis .....	...	...	...	...	...	...	35	...	35	...
Phimosis .....	...	30	...	30	2	...	...	...	...	...
Cysts or other non-malignant Tumours of the Ovaries.....	...	31	...	31	2	...	14	10	14	...
Salpingitis .....	...	...	...	...	...	...	1	...	1	...
Abscess of the Pelvis.....	1	25	...	26	1	2	31	3	33	...
Uterine Tumours (non-malignant) ...	...	37	...	37	1	1	11	...	12	...
Uterine Hæmorrhage (non-puerperal)	...	10	...	10	...	...	19	...	19	...
Metritis .....	...	11	...	11	...	...	9	...	9	...
Other affections of the Female Genital Organs :—										
Displacements of Uterus .....	...	40	...	40	3	...	6	...	6	...
Amenorrhœa .....	...	...	...	...	...	...	5	...	5	...
Dysmenorrhœa .....	...	6	...	6	...	...	10	...	10	...
Leucorrhœa.....	...	4	...	4	1	...	3	...	3	...
Diseases of the Breast (non- puerperal :—										
Mastitis	1	10	...	11	...	...	1	...	1	...
Abscess of Breast .....	...	29	...	29	1	...	2	...	2	...
<i>Carried forward.....</i>	138	4,321	316	4,459	168	532	12,342	3,501	12,874	495

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	138	4,321	316	4,459	168	532	12,342	3,501	12,874	495
<i>VIII.—Puerperal State.</i>										
Normal Labour	4	790	...	794	23	30	4,434	2	4,464	40
(a) Abortion	3	23	...	26	2	...	36	1	36	2
(b) Ectopic Gestation .....	...	6	...	6	...	...	...	...	...	...
(c) Other accidents of Pregnancy .....	...	59	5	59	...	...	...	...	...	...
Puerperal Hæmorrhage .....	...	...	...	...	...	...	29	2	29	...
Other accidents of Parturition	1	3	...	4	...	...	1	...	1	...
Puerperal Septicæmia .....	...	3	1	3	...	...	4	3	4	...
Puerperal Eclampsia .....	...	1	1	1	...	...	14	6	14	...
Sequelæ of Labour.....	...	...	...	...	...	...	1	...	1	...
<i>IX.—Affections of the Skin and Cellular Tissues.</i>										
Gangrene .....	...	3	...	3	...	3	16	2	19	5
Boil .....	...	16	...	16	...	...	78	...	78	...
Carbuncle	2	44	...	46	3	2	64	...	66	1
Abscess .....	...	...	...	...	...	...	194	...	194	...
Whitlow .....	...	5	...	5	...	2	19	...	21	...
Cellulitis	14	216	3	230	8	53	520	46	573	27
Tinea .....	...	11	...	11	...	2	3	...	5	...
Scabies .....	...	31	...	31	...	5	62	...	67	6
<i>Other Diseases of the Skin :—</i>										
Pediculosis .....	...	2	...	2	...	...	...	...	...	...
Pemphigus .....	...	1	...	1	...	...	...	...	...	...
Keloid .....	...	3	...	3	...	...	...	...	...	...
Impetigo .....	...	2	...	2	...	...	...	...	...	...
Erythema .....	...	3	...	3	...	10	42	...	52	5
Urticaria .....	...	7	...	7	...	2	3	...	5	...
Eczema .....	...	39	...	39	1	5	34	...	39	5
Herpes.....	...	2	...	2	...	2	3	...	5	...
Psoriasis .....	...	10	...	10	1	...	...	...	...	...
Elephantiasis .....	...	3	...	3	...	...	10	...	10	2
Ulcer .....	...	...	...	...	...	20	248	...	268	15
<i>Carried forward.....</i>	162	5,604	326	5,766	206	668	18,157	3,563	18,825	603

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

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Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	162	5,604	326	5,766	206	668	18,157	3,563	18,825	603
<i>X.—Diseases of Bones and Organs of Locomotion (other than Tuberculous).</i>										
Diseases of Bones :—										
Osteitis	2	8	...	10	...	2	58	4	60	7
Diseases of Joints :—										
Arthritis	1	21	...	22	3	2	76	2	78	...
Synovitis	1	26	...	27	1	...	18	...	18	...
Other Diseases of Bones or Organs of Locomotion.....	1	17	...	18	1	..	29	...	29	5
<i>XI.—Malformations.</i>										
Malformations :—										
Hydrocephelas .....	...	3	...	3	...	...	4	3	4	...
Hypospadias .....	...	2	...	2	1	..	5	...	5	...
Spina Bifida, &c. ....	...	4	...	4	...	...	8	1	8	...
Hare lip and Cleft Palate .....	...	14	...	14	...	...	...	...	...	...
Talipes	1	4	...	5	1	...	...	...	...	...
Supernumerary Toes .....	...	2	...	2	...	...	...	...	...	...
Imperforate Anns .....	...	1	...	1	...	...	...	...	...	...
<i>XII.—Diseases of Infancy.</i>										
Congenital Debility .....	...	4	...	4	...	...	28	28	28	...
Other affections of Infancy .....	...	...	...	...	...	...	10	...	10	5
Infant neglect (infants of three months or over) .....	...	3	...	3	...	16	153	92	169	25
<i>XIII.—Affections of Old Age.</i>										
Senility :—										
Senile Dementia.....	1	2	...	3	...	...	27	7	27	...
<i>XIV.—Affections produced by External Causes.</i>										
Suicide by Poisoning.....	...	21	8	21	...	...	...	...	...	...
Corrosive Poisoning (intentional).....	...	12	3	12	...	...	...	...	...	...
Suicide by Drowning.....	...	32	...	32	...	...	...	...	...	..
Suicide by Firearms .....	...	1	1	1	...	...	...	...	...	...
Suicide by cutting or stabbing Ins- truments .....	...	4	...	4	...	...	...	...	...	...
<i>Carried forward.....</i>	169	5,785	338	5,954	213	688	18,573	3,700	19,261	645

Return of Diseases and Deaths (In-Patients) for the Year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	169	5,785	338	5,954	213	688	18,573	3,700	19,261	645
<i>XIV.—Affections produced by External Causes,—Continued.</i>										
Food Poisoning .....	...	16	...	16	...	...	...	...	...	...
Attacks of poisonous animals:—										
Snake Bite .....	...	4	...	4	...	...	...	...	...	...
Insect Bite .....	...	1	...	1	...	...	...	...	...	...
Other accidental Poisonings .....	...	1	...	1	...	...	2	...	2	...
Burns (by Fire) .....	...	161	15	161	5	6	45	...	51	5
Burns (other than by Fire)	1	90	9	91	2	...	2	...	2	...
Suffocation (accidental).....	...	2	...	2	...	...	...	...	...	...
Drowning (accidental) .....	...	3	...	3	...	...	11	...	11	...
Wounds (by Firearms, war excepted)...	2	6	1	8	...	...	11	...	11	...
Wounds (by cutting or stabbing Instruments)	21	301	...	322	13	5	39	...	44	6
Wounds (by Fall)	2	200	42	202	14	5	38	...	43	6
Wounds (by Machinery) .....	...	16	3	16	...	...	2	...	2	...
Wounds (crushing, <i>e.g.</i> railway accidents, &c.) .....	...	247	41	247	14	5	30	...	35	7
Injuries inflicted by Animals, Bites, Kicks, &c. ....	...	13	...	13	...	...	3	...	3	...
Over fatigue .....	...	1	...	1	...	...	...	...	...	...
Exposure to Cold, Frost bite, &c. ...	...	...	...	...	...	2	30	5	32	2
Exposure to Heat:—										
Heatstroke .....	...	3	...	3	...	...	17	...	17	...
Sunstroke .....	...	2	...	2	...	...	...	...	...	...
Electric Shock .....	...	6	...	6	...	...	...	...	...	...
Murder by cutting or stabbing Instruments .....	...	2	2	2	...	...	...	...	...	...
Dislocation .....	...	14	...	14	1	...	12	...	12	...
Sprain .....	...	10	...	10	...	...	129	...	129	...
Fracture	21	193	8	214	13	5	74	...	79	3
Other external Injuries .....	...	114	...	114	3	23	546	21	569	19
<i>Carried forward.....</i>	216	7,191	459	7,407	278	739	19,564	3,726	20,303	693

Return of Diseases and Deaths (In-Patients) for the year 1928.

APPENDIX D.

APPENDIX E.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.	Remain- ing in Hospital at end of 1927.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1928.
		Admis- sions.	Deaths.				Admis- sions.	Deaths.		
<i>Brought forward.....</i>	216	7,191	459	7,407	278	739	19,564	3,726	20,303	693
<i>XV.—Ill-Defined Diseases.</i>										
Diseases not already specified or ill- defined :—										
Ascites .....	...	1	...	1	...	...	24	...	24	...
Asthenia .....	...	16	..	16	...	...	...	...	...	...
Hyperprexia	1	25	...	26	2	...	...	...	...	...
Malingering .....	...	3	...	3	...	...	4	...	4	...
<i>XVI.—Diseases, the total of which have not caused 10 Deaths.</i>										
In Attendance .....	...	6	...	6	...	...	...	...	...	...
Observation	4	123	...	127	5	...	...	...	...	...
TOTAL.....	221	7,365	459	7,586	285	739	19,592	3,726	20,331	693

APPENDIX F.

Mortuaries-Return of Diseases for the year 1928.

Diseases.	Male.	Female.
<i>I.—Epidemic, Endemic, and Infectious Diseases.</i>		
Enteric Group:—		
(a) Typhoid Fever	8	3
(b) Paratyphoid A	1	...
Malaria:—		
Aestivo-autumnal.....	47	34
Smallpox	229	225
Diphtheria.....	3	1
Miliary Fever	54	29
Dysentery:—		
(a) Amœbic	1	...
(b) Bacillary	2	...
Plague:—		
(a) Septicæmic	1	...
Leprosy	1	...
Epidemic Cerebro-spinal Fever	10	4
Tuberculosis Pulmonary and Laryngeal	481	534
Tuberculosis of the Meninges or Central Nervous System	5	...
Tuberculosis of the Intestines or Peritoneum	19	23
Tuberculosis of the Vertebral Column ...	1	2
Tuberculosis of other organs	1	1
Tuberculosis disseminated:—		
(a) Acute ..	8	23
(b) Chronic	12	7
Syphilis:—		
(a) Tertiary	1	...
(b) Hereditary	19	44
Septicæmia	3	...
<i>II.—General Diseases not mentioned above.</i>		
Cancer or other malignant Tumours of Organs not specified	1	...
<i>Carried forward.....</i>	908	930

Mortuaries Return of Diseases for the year 1928.

Diseases.	Male.	Female.
<i>Brought forward.....</i>	908	930
<i>II.—General Diseases not mentioned above,—Continued.</i>		
Beri-beri	72	11
Diseases of the Thymus	1	...
Other General Diseases:—		
Purpura Hæmorrhagica	1	...
<i>III.—Affections of the Nervous System and Organs of the Senses.</i>		
Meningitis not including Tuberculous Meningitis or Cerebrospinal Men- ingitis	8	5
Apoplexy:—		
(a) Hæmorrhage	1	2
Epilepsy	1	...
<i>IV.—Affections of the Circulatory System.</i>		
Pericarditis	9	5
Acute Endocarditis or Myocarditis	4	1
Other Diseases of the Heart:—		
(a) Valvular:—		
Mitral .....	...	2
Pulmonary	5	1
(b) Myocarditis	4	3
Diseases of the Arteries:—		
(a) Aneurism	10	1
(b) Arterio-Sclerosis	9	...
Embolism or Thrombosis (non-cerebral)...	2	...
<i>V.—Affections of Respiratory System.</i>		
Bronchitis:—		
(a) Acute.....	402	388
Broneho-Pneumonia	592	704
Pneumonia:—		
(a) Lobar	96	26
Pleurisy, Empyema	71	47
Congestion of the Lungs.....	57	40
<i>Carried forward.....</i>	2,253	2,166

Mortuaries-Return of Diseases for the year 1928.

Diseases.	Male.	Female.
<i>Brought forward</i>	2,253	2,166
<i>VI.—Diseases of the Digestive System.</i>		
Affections of the Pharynx or Tonsils:—		
Tonsillitis .....	...	1
Ulcer of the Stomach	1	...
Diarrhœa and Enteritis:—		
Under two years	271	177
Colitis .....	...	4
Ulceration	2	2
Ankylostomiasis	1	...
Diseases due to Intestinal Parasites:—		
(a) Trematoda (Flukes)	2	...
(b) Nematoda (other than Ankylostoma):—		
Ascaris	1	2
Appendicitis	4	...
Hernia	1	...
Other affections of the intestines:—		
Enteroptosis	3	3
Cirrhosis of the Liver:—		
(a) Alcoholic	4	5
(b) Other forms .....	...	1
Other affections of the Liver:—		
Hepatitis .....	...	3
Cholecystitis.....	1	1
Jaundice	31	30
Peritonitis (of unknown cause)	8	1
<i>VII.—Diseases of the Genito-urinary System (non-Venereal).</i>		
Acute Nephritis	7	4
Chronic	3	3
Other affections of the Kidneys, Pyelitis, &c.	17	14
Diseases of the Bladder:—		
Cystitis	2	...
Diseases of the Urethra	1	...
<i>Carried forward</i>	2,613	2,417

Mortuaries-Return of Diseases for the year 1928.

Diseases.	Male.	Female.
<i>Brought forward</i>	2,613	2,417
<i>VIII.—Puerperal State.</i>		
Accidents of Pregnancy :—		
Abortion .....	...	4
Puerperal Septicæmia .....	...	1
<i>IX.—Affections of the Skin and Cellular Tissues.</i>		
Gangrene	1	...
Abscess:—		
Cellulitis	1	2
<i>XI.—Malformations.</i>		
Malformations :—		
Hydrocephelas	2	1
<i>XII.—Diseases of Infancy.</i>		
Congenital Debility	137	36
Premature Birth:—		
(a) Prematurity	9	12
(b) Still born	102	94
Other affections of Infancy.....	2	...
Infant neglect (infants of three months or over)	7	5
<i>XIV.—Affections produced by External Causes.</i>		
Suicide by Poisoning (Opium)	2	8
Corrosive Poisoning (intentional) (Lysol) .....	...	2
Suicide by Hanging or Strangulation ...	16	5
Suicide by Drowning	43	24
Suicide by cutting or stabbing Instruments	1	...
Food Poisoning.....	2	...
Burns (by Fire)	5	5
Burns (other than by Fire)	3	2
Wounds (by Firearms, war excepted) ...	1	...
<i>Carried forward</i>	2,977	2,647

Mortuaries-Return of Diseases for the year 1928.

Diseases.	Male.	Female.
<i>Brought forward.....</i>	2,977	2,648
<i>XII.— Affections produced by External Causes,—Contd.</i>		
Wounds (by cutting or stabbing Instruments)	7	6
Wounds (by Fall).....	18	21
Wounds (crushing, <i>e.g.</i> railway accidents, &c.)	3	3
Wounds inflicted on Active Service	2	...
Electric Shock	1	...
Murder by Firearms.....	7	2
Murder by cutting or stabbing Instruments	6	...
Murder by other means (Strangulation)...	1	...
Other external Injuries	26	...
<i>XV—Ill Defined Diseases.</i>		
Too decomposed	109	65
<i>Total.....</i>	3,127	2,715
<i>Grand Total.....</i>	5,842	

